

PHASE 1 SAMPLING AND ANALYSIS REPORT

**FORMER P.R. MALLORY PLANT SITE
CRAWFORDSVILLE, INDIANA**

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REPORT**

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CRAWFORDSVILLE, INDIANA**

**April 1987
Ref. No. 1916**

CONESTOGA-ROVERS & ASSOCIATES

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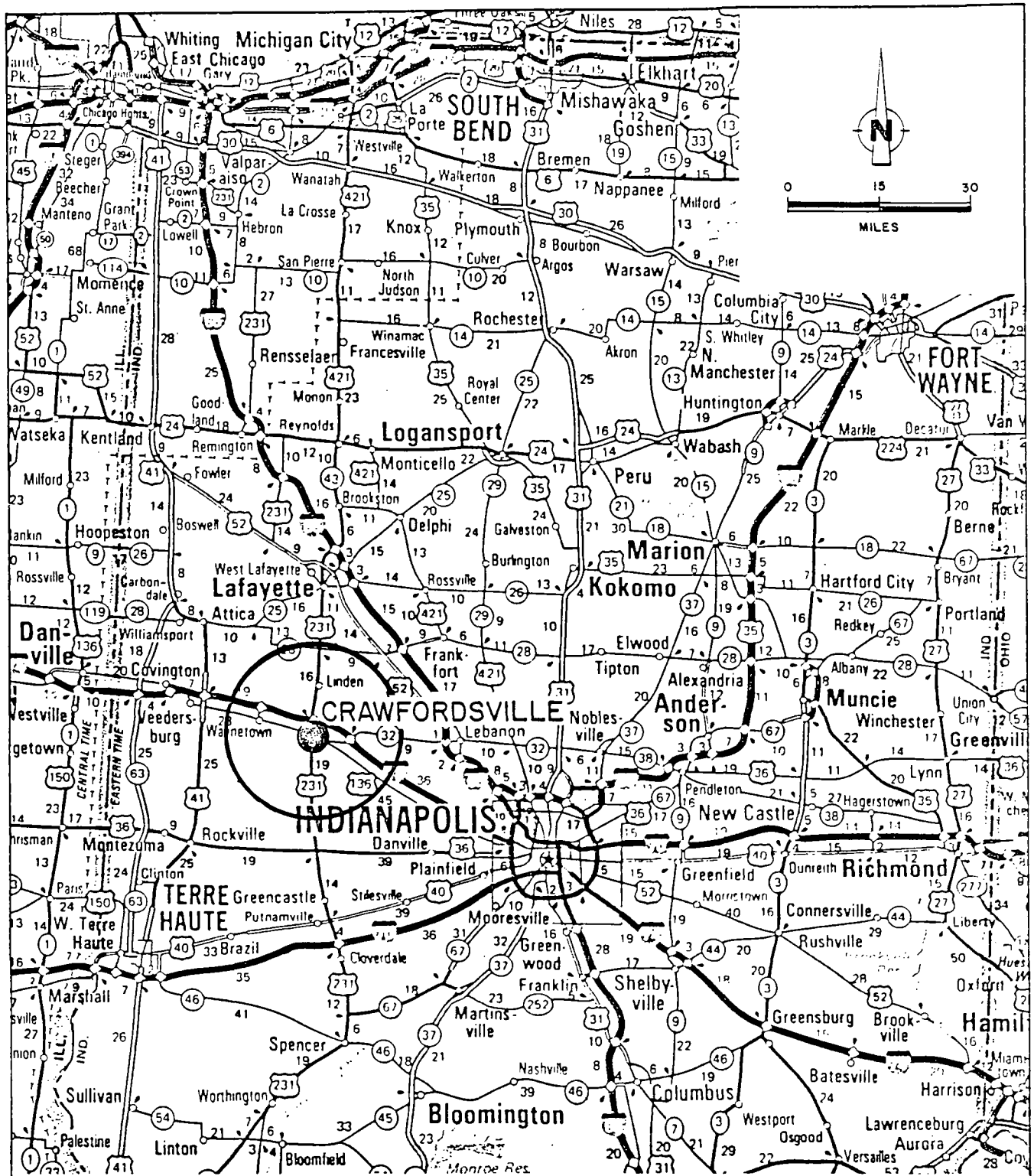
1.0 INTRODUCTION

1.1 GENERAL

The former P.R. Mallory plant site is located approximately three miles east of Crawfordsville, Indiana on the north side of State Road No. 32 (see Figure 1.1). The P.R. Mallory Company manufactured dielectric capacitors at the plant site from 1957 until 1969 when the plant was destroyed by fire.

The former plant site encompasses approximately four acres of land. The site is bordered by State Road No. 32 on the south, Superior Moving and Storage on the east, Little Sugar Creek on the north and Terra Products on the west. The concrete slab from the former plant building is located on the southern portion of the site. The pumphouse and incinerator from the former plant are located north of the existing concrete slab. A ravine and intermittent stream run through the northern portion of the site and intersect Little Sugar Creek at the northern boundary of the site. The general site layout is illustrated on Plan 1.

The United States Environmental Protection Agency (EPA) issued an amended Administrative Order on August 20, 1986, which required the respondents (Duracell



SOURCE: EASTERN STATES NORTH AND PROVINCE
AMERICAN AUTOMOBILE ASSOCIATION
1981 EDITION

CRA

figure I.1
SITE LOCATION
Crawfordsville, Indiana

International Inc., Terra Products, Superior Moving and Storage), to implement emergency remedial activities at the plant site.

The major remedial activities implemented to date, in accordance with the revised Administrative Order, are as follows:

1. Construction of a security fence around the former plant site;
2. Preliminary soil sampling and analysis;
3. Phase I Remedial Construction including excavation and on-site securement of contaminated soil and debris;
4. Construction of seven groundwater monitoring wells; and
5. Development and implementation of a comprehensive environmental sampling and analysis program.

The sampling and analysis program was carried out concurrently with the Phase I remedial construction activities. The program involved the collection of approximately 290 environmental samples consisting of soil, sediment, concrete, surface water, ground water, air and surface wipe samples.

The proposed Phase I sampling program was presented in the Response Action Work Plan (RAWP) prepared by Duracell and submitted to the Agencies [EPA and Indiana Department of Environmental Management (IDEM)] on October 9, 1986. Duracell met with the Agencies on October 27, 1986 to review the RAWP. A revised RAWP was submitted to the Agencies on October 31, 1986; the revised RAWP was conditionally approved by the EPA on November 12, 1986.

As requested by the Agencies, a Quality Assurance Project Plan (QAPP) was developed to supplement the sampling and analysis program outlined in the RAWP. The QAPP was forwarded to the Agencies on November 13, 1986. The IDEM commented on the QAPP, and subsequent Duracell response (dated January 6, 1987), by letters dated December 22, 1986 and February 27, 1987.

The Phase I sampling program was implemented in accordance with the approved RAWP, the QAPP, and subsequent revisions and modifications to these plans as approved and/or directed by the Agencies.

The Phase I sampling program was designed to characterize the site and define the areal and vertical extent of residual contamination. Results of this program will be used to define the scope of work for the Phase II remedial construction program.

This report has been prepared to describe the sampling and analytical protocols followed, procedural variations from the RAWP and QAPP and the results of the program. Previous sampling conducted at the former plant site is summarized in the section which follows.

Phase I remedial construction activities are detailed in a report entitled, "Phase I Remedial Action Report," February, 1987, by Conestoga-Rovers & Associates. Monitoring well construction details and the groundwater monitoring program are presented in a report entitled, "Interim Report, Hydrogeological Investigation, Former P.R. Mallory Plant Site, Crawfordsville, Indiana", March 1987.

1.2 PRELIMINARY SITE SAMPLING

On April 16, 1986, the Indiana Department of Environmental Management (IDEM) requested the EPA to investigate and initiate a removal action at the plant site. The request was made after IDEM representatives observed capacitors disposed of in a ravine and lying on the ground surface adjacent to the plant site. IDEM representatives sampled the oil in the capacitors and reported PCB concentrations in the oil were as high as 100 percent.

On April 19, 1986, EPA representatives conducted an assessment of the site, which included a preliminary soil sampling program. The results of the sampling program indicated PCB concentrations in the soil in the apparent capacitor disposal area, ranged from 325 parts per million (ppm) to 165,402 ppm.

A preliminary sampling and analysis program was conducted at the plant site by Conestoga-Rovers & Associates (CRA). Samples were collected at the site on August 6, 1986. The results of the sampling program are presented in a report entitled, "Initial Site Screening: Sampling Program, Former P.R. Mallory Plant Site, Crawfordsville, Indiana", forwarded to the EPA and the IDEM on September 18, 1986.

The preliminary sampling and analysis program confirmed the presence of high concentrations of PCBs in the capacitor disposal area. PCB concentrations in the soil ranged from a maximum of 130,000 ppm in the main disposal area to 7,200 ppm adjacent to the incinerator. Concentrations of total dioxin varied from 40.1 ppb in the disposal area to 0.75 ppb in the stream bed; dibenzofuran concentrations varied from approximately 1.0 ppm to a maximum concentration of 5.1 ppm detected in the disposal area.

2.0 PHASE I SAMPLING AND ANALYSIS PROGRAM

2.1 GENERAL

The Phase I sampling and analysis program was carried out concurrently with the Phase I remedial construction activities implemented at the plant site. Sample collection was initiated on November 30, 1986. The program was implemented in accordance with the approved Response Action Work Plan (RAWP), the Quality Assurance Project Plan (QAPP), and subsequent revisions and modifications to these plans as approved and/or directed by the Agencies. Several minor procedural modifications were made in the field to accommodate unforeseen conditions. The procedural modifications did not affect the integrity of the samples; the field procedures followed are outlined in the Sections which follow.

2.2 SAMPLE LOCATIONS

The site sampling program involved the collection of 221 soil, 25 sediment, 19 surface water, 10 groundwater, 3 air, 5 concrete core, and 6 surface wipe samples. Additional samples were collected in accordance with the Quality Assurance/Quality Control (QA/QC) protocols presented in the RAWP and QAPP. The sampling locations are

illustrated on Plan 1. The sampling network was designed to provide data representative of current site conditions. During development of this network, consideration was given to past site operations, existing analytical data, remedial activities ongoing at the site, and physical setting.

2.3 SOIL SAMPLES

2.3.1 General

The collection of soil samples commenced on December 1, 1986. A field grid was established over the excavation areas and lands adjacent to the existing concrete slab to accurately determine sample locations. Sample locations in the ravine and along Little Sugar Creek were staked and located during a subsequent survey of the site. The location of all samples was referenced to existing survey control points.

In general, all soil samples were collected on a 50-foot spacing around the plant site. Samples collected adjacent to the north edge of the existing concrete slab and throughout the apparent disposal areas were collected on a 25-foot spacing. Three samples were collected from the northeast slope of the ravine at locations selected by the Indiana Department of Environmental Management.

The 50-foot grid spacing was applied throughout the open areas of the site where there was little or no evidence of surface contamination. The 25-foot spacing was applied to areas where surface contamination has been confirmed or is suspected and is shown as Sample Area A on Plan 1. Sample locations adjacent to the site were based on a 100-foot sample spacing.

Samples collected from the apparent capacitor disposal areas were collected following excavation of surficial soils. One background soil sample was collected from the field south of the plant site.

2.3.2 Equipment Preparation

All soil sampling equipment was decontaminated, prior to field use, in accordance with the procedures outlined in Section 3.1.

2.3.3 Soil Sample Collection

Where possible, two soil samples were collected for analysis from the top twelve inches of soil at each soil sampling location. One sample was collected from the top six inches of soil and a second sample was collected

from the underlying six inches. The underlying sample was analyzed if total concentrations of parameters in the upper sample exceeded pre-defined limits, or if the upper six inch zone appeared to be non-native fill material. Concentrations of 1 part per million (ppm) PCB or 1 part per billion (ppb) dioxin/furan in the upper sample triggered the analysis of the underlying sample.

Dioxins and dibenzofurans were analyzed for at approximately ten percent of the soil sample locations. Approximately ten percent of the samples collected from Sample Area A, as illustrated on Plan 1, were also analyzed for priority pollutant base, neutral and acid extractables; and volatile organic compounds.

Three alternate methods were employed for soil sample collection, as follows:

1. hand driven split-spoon sampler;
2. machine driven split-spoon sampler; or
3. collection with stainless steel spoons and trowels.

Each of the methods employed is described in the Sections which follow:

a) Hand-Driven Split-Spoon Sampler

Prior to use at each location, sampling equipment was decontaminated in accordance with the protocols outlined in Section 3.1. A new pair of disposable gloves was used at each sample location and for the preparation of samples from different vertical zones at each individual location.

The split-spoon sampler was manually driven approximately fifteen (15) inches into the ground. The split spoon was removed from the hole and opened upon a clean polyethylene or aluminum foil sheet.

A clean cutting tool was then used to remove the lower portion of the core. The remaining 12-inch long core was then cut in half to segregate the top six inches of soil from the underlying six inches.

Clean sampling tools were used to remove and discard the outer layer of material from the upper six-inch sample. The remaining core material was placed in a clean, pre-labelled sample jar and sealed with a teflon lined cap.

A new pair of disposable gloves and clean sampling tools were then used to prepare the underlying six-inch sample.

Soil samples collected from beneath the concrete slab were collected immediately following removal of the concrete core from each sampling location. The split spoon was driven approximately seven inches into the soil. Following spoon retrieval, the lower one inch of the core was removed and the remainder of the core was retained. The outside of the core was not discarded due to the limited amount of sample material available.

b) Machine-Driven Split-Spoon Sampler

Along existing driveways and in other areas where stones, rocks or other debris made sample collection by hand methods impractical, a mobile CME 45B drill rig was used to drive split spoons for sample collection. The rig was used to collect samples from 27 locations situated on the Superior Moving and Storage driveway and along the western edge of the existing concrete slab.

Prior to use at each sample location, all sampling tools were decontaminated in accordance with the procedures outlined in Section 3.1.

The drill rig was used to drive the split spoon 16 to 24 inches into the soil. Varying soil depths were segregated, prepared and sampled using the procedures described in Section 2.3.3 a). Where surficial vegetation was retained in the split spoon sampler, this material was segregated from the top six-inch layer of soil and discarded.

Where insufficient material was collected for analysis, a second core was driven immediately adjacent to the first. The split spoon was not cleaned prior to collection of the second core from a single location. Samples from corresponding depths at one location, were composited and homogenized in a stainless steel bowl prior to placement of the sample in the sample jar.

Significant quantities of crushed stone and broken clay tile were found in the upper 12 inches of soil along the western edge of the existing concrete slab. Where this material was encountered, additional samples from successive six-inch layers were also collected until native till material was encountered.

During collection of samples from the Superior Moving and Storage driveway, east of the concrete slab, samples were only collected from the first two six-inch layers of native material encountered beneath the gravel surface,

as directed by the Indiana Department of Environmental Management. An 8-inch auger was used to remove the overlying gravel and expose the surface of the native material; a clean split spoon was then driven into the native material. The core was removed from the spoon and the top disturbed layer discarded. The samples were then segregated, prepared and collected as previously described.

c) Hand Collection

Throughout most of the site, surficial soils were easily penetrated and the samples were collected using pre-cleaned stainless steel knives and spoons. The surficial soil sample was collected by hand coring a 2-inch diameter hole, six inches deep, with a stainless steel spoon or knife. Following collection of the top six-inch sample, a larger hole, approximately one foot in diameter and six inches deep, was dug around the original sample location with a shovel or spade. This material was removed with the shovel and placed adjacent to the hole. A clean knife and/or spoon was then used to scrape away the next one-half inch of soil in order to prevent cross contamination of the lower six-inch sample from the shovel. The lower six-inch sample was collected by hand coring a second hole in the underlying soil with a new pre-cleaned knife or spoon. A new pair of disposable

gloves was used for the collection of each sample from the different vertical zones and at each sample location.

Where additional material was required for field duplicates or additional analyses, samples were homogenized in a pre-cleaned stainless steel bowl prior to placement in the sample jar. Samples collected for the analysis of volatile organic compounds were placed directly in 40 ml sample vials and were not homogenized.

2.4 SURFACE WATER AND SEDIMENT SAMPLES

2.4.1 General

Stream sediment and surface water samples were collected from the ravine adjacent to the site at 50-foot intervals from Little Sugar Creek to the eastern boundary of the site. In addition, sediment and surface water samples were taken from one location approximately 100 feet outside the security fence, upstream of the apparent capacitor disposal areas.

Sediment samples were also taken from Little Sugar Creek. One sample was taken upstream and four samples were taken downstream of the confluence of the ravine and

The surface water and sediment sample locations are shown on Figure 6.1 and Plan 1, respectively.

All sediment sampling equipment was decontaminated prior to field use, in accordance with the procedures outlined in Section 3.1.

Sediment samples from Little Sugar Creek and from the ravine were collected using a two-inch split-spoon sampler. At all but two sample locations only the top six-inch layer could be collected for each sample due to refusal of the split spoon on the creek bottom. The samples were collected and prepared in accordance with the soil sampling procedures described in Section 2.3.3 a). The

entire core was retained for the sample in all locations where the sediment consisted of loose granular material.

Where possible, surface water samples were collected at each sediment sample location. Surface water samples were collected by the grab sample method immediately prior to collection of the sediment samples. Surface water samples could not be collected at several ravine locations due to lack of water. Tests for specific conductivity and dissolved oxygen were performed at the time of sampling using a portable Hach Dissolved Oxygen Test Kit, Model OX-DT. Additional 40 ml samples of the surface water were collected at each sample location and forwarded to Wadsworth-Alert Laboratories for pH analysis due to apparent malfunctioning of the pH meter. Conductivity testing was discontinued when the conductivity meter began recording negative values for surface water temperature and inconsistent conductivity values. Dissolved oxygen testing could not be completed on all samples during field sample collection; low ambient temperatures caused ice crystals to form in the sample test vial resulting in uneven distribution of the reagents added to the vial and inaccurate dissolved oxygen results.

All surface water and sediment samples were analyzed for PCBs. Two samples of each were also analyzed for dioxins and dibenzofurans.

2.5 GROUNDWATER SAMPLES

2.5.1 General

Groundwater samples were collected from each monitoring well following initial well development. The locations of the wells are shown on Plan 1.

2.5.2 Equipment Decontamination

Stainless steel bailers used in collection of the groundwater samples were decontaminated prior to use at each monitoring well, by the following procedures:

1. rinse with methanol;
2. rinse with hexane;
3. rinse with methanol; and
4. rinse with deionized water.

2.5.3 Groundwater Sample Collection

Five well volumes of groundwater could not be purged from all wells prior to sample collection due to relatively slow recovery times of the wells. When this occurred, the wells were bailed dry on three consecutive days

and allowed to recovery to a level that would permit sample collection. Monitoring well OW4A-86, installed within the aquifer unit, provided water without noticeable drawdown and more than five volumes were removed prior to sampling. Monitoring well OW1A-86 did not recover quickly and was bailed dry on three consecutive days but did not reach an equilibrium level during the sampling program.

Groundwater samples were collected for analysis for priority pollutant volatiles, PCBs, metals and general chemistry indicator parameters. Samples were poured directly from the stainless steel bailers into the appropriate sample bottles.

One groundwater sample was collected for dioxin/furan analysis from monitoring well OW4B-86.

Additional samples were also collected for QA/QC analysis. The water blank sample was poured directly from the bottled deionized water. The bailer rinse sample was poured from a clean bailer prior to use in monitoring well OW4B-86. Duplicate samples and matrix spike samples were obtained from monitoring wells OW4B-86 and OW2-86, respectively, using the same bailer as was used for collection of the original water sample.

Water samples for PCB and VOC analysis were obtained from wells on neighboring properties. These samples were collected from existing taps located as close to the well pump as possible. To ensure that representative samples were collected, the water was allowed to run for several minutes prior to sample collection.

2.6 AIR SAMPLES

On November 30, 1986, ambient air samples were collected from four locations at the site as shown on Plan 1. The sampling pumps used were MSA Flow-Lite Portable P/N 479680 pumps. The same pump was utilized to collect air samples for both gaseous phase and particulate PCBs by connecting a glass fiber prefilter and florasil tube in series. The sampling pumps were calibrated at a rate of 0.5 L/min. The sampling time was adjusted to conform to NIOSH recommendations for PCB air sampling at an approximate total volume of 120 liters. The sample pump located upgradient from the apparent disposal area failed during sample collection, therefore, a background sample was not collected.

Due to the relatively high volume of sample to be collected, two florasil tubes were connected in series, with the glass fiber prefilter, to contain the entire sample

in the event of breakthrough of the first in-line tube. Laboratory analyses confirmed that breakthrough from the first florasil tube did not occur at any of the air sample locations. All florasil tubes and glass fiber prefilters were supplied by Envirotech Laboratories and were taken from identical lots for each sampling media.

2.7 CONCRETE CORE SAMPLES

2.7.1 General

On December 3 and 4, 1986, five concrete core samples were collected from the existing concrete slab. The core sample locations are shown on Plan 1.

2.7.2 Equipment Decontamination

Prior to collection of each concrete core sample, the coring bit was decontaminated in accordance with the procedures outlined in Section 3.1.

2.7.3 Concrete Core Sample Collection

Concrete core samples were collected using a portable four-inch diameter core drill. Two of the five samples collected crumbled as they were removed from the drill bit. The three concrete core samples that remained intact were approximately six inches to eight inches thick.

Following removal of the concrete core at each location, a subsurface soil sample was collected from the top six inches of soil below the slab. Four of the subsurface soil samples were collected using a split spoon sampler as outlined in Section 2.3.3 a). In one case the split spoon sampler did not retain enough material for a sample, therefore, the soil sample was collected using a pre-cleaned stainless steel spoon.

2.8 WIPE SAMPLES

2.8.1 General

Following steam cleaning, surface wipe samples were taken from the scrap metal and debris which were removed from the ravine area. A total of four wipe samples were collected from the steam cleaned debris; two additional wipe samples were collected from scrap disposed of by

Superior Moving which was previously located adjacent to the site and then relocated to the back of Superior Moving's truck parking area in August of 1986.

2.8.2 Wipe Sample Collection

Sampling areas were marked out and the borders taped to accurately determine the sample area. In most cases the actual sample size was smaller than 0.25 m² as suggested in the QAPP, due to the geometry of the debris being sampled. The actual surface area sampled was measured and recorded prior to sample collection.

The wipe samples were collected as follows: an 11 cm diameter Whatman paper filter was moistened with pesticide grade hexane; the marked-off area was wiped in two directions, the second direction at a 90° angle to the first direction; the paper filter was re-moistened, as required, during sample collection as the hexane volatilized quickly before the whole sampling area could be wiped.

Following wiping in both directions the paper filter was folded with the exposed surfaces inwards and placed in a glass amber sample jar. The sample jar was then sealed with a teflon-lined lid. A new pair of disposable gloves was used for each sample location.

3.0 SAMPLE PREPARATION AND HANDLING

3.1 EQUIPMENT DECONTAMINATION

All sampling equipment was decontaminated prior to sample collection in order to prevent cross contamination of samples. Duplicate samples were collected concurrently with the original samples, therefore, sampling equipment was not decontaminated prior to collection of the duplicates.

Decontamination of equipment used for the collection of soil, sediment, and concrete core samples was performed as follows:

1. clean water wash to remove all visible foreign matter;
2. rinse with deionized water;
3. rinse with reagent-grade acetone;
4. rinse with 1,1,1-trichloroethane
5. air dry on clean plastic sheet.

Decontamination procedures for cleaning equipment used for the collection of groundwater samples are outlined in Section 2.5.2.

Decontamination fluids and rinse waters used for cleaning the sampling equipment were not recycled. All

wash water, rinse water, and decontamination fluids were collected in a plastic wash basin or pail during decontamination. Fluids were transferred to a 55-gallon drum and stored on site.

3.2 SAMPLE HANDLING

Prior to sample collection, sample bottles were labelled with the following information:

1. project name - Crawfordsville;
2. job number - 1916;
3. date; and
4. sample identification number.

The time the sample was collected and the sampler's initials were added to the label following sample collection. The label was then sealed in clear plastic tape, the bottle lid was sealed with tape and the bottle was enclosed in a polyethylene zip-lock bag. Each sample was logged on a Chain of Custody Record Form and wrapped in packing material to prevent breakage. Samples were placed in a cooler packed with foam chips or newspaper to cushion the samples during shipment. Bags of ice or cooler packs were placed in the cooler with the samples. The completed Chain of Custody Record Form was sealed in a zip-lock bag and placed in the

cooler. The cooler was sealed with fiberglass strapping tape and a CRA security seal was placed on the cooler prior to shipping.

Copies of the completed Chain of Custody Record Forms are included in Appendix B.

3.3 WASTE MATERIAL HANDLING

Solid waste material generated from the sampling program, including Saranex-coated Tyvek coveralls, gloves, foil, and discarded ground sheets, were placed in 55-gallon drums. Full drums were sealed and stored on site in the interim storage cell.

3.4 SAMPLE DELIVERY

All samples were shipped by Federal Express overnight courier under approved chain of custody procedures. A daily Federal Express pickup was arranged and samples were shipped at 6:00 p.m. daily.

4.0 CONTRACT LABORATORY PROGRAM LABORATORIES

4.1 GENERAL

Two USEPA Contract Laboratory Program (CLP) laboratories were selected to perform the analyses required for the samples collected during the Phase I Remedial Action Program. Wadsworth-Alert Laboratories, located in Canton, Ohio, was selected to perform all chemical analyses with the exception of polychlorinated dioxins and furans. The analyses for dioxin/furan was performed by Hazleton Laboratories in Madison, Wisconsin. Air samples, collected November 30, 1986, prior to final EPA approval of the analytical laboratories, were analyzed by Envirotest Laboratories, Newburgh, New York.

4.2 ANALYTICAL PROTOCOLS

The analytical protocols used for determining the targeted parameters are as listed on Tables 4.1 and 4.2. The Laboratory Quality Assurance/Quality Control protocols used for these analyses were in accordance with CLP guidelines.

Samples received by Wadsworth-Alert Laboratories after December 17, 1986 were analyzed in strict

TABLE 4.1

ANALYTICAL METHODS SUMMARY

<u>Sample</u>	<u>Parameter</u>	<u>Method for Extraction/Cleanup</u>	<u>Method for Analyses</u>
Soil/Sediment	Total PCBs	3540(1)/3550(1)	8080(1)
	Dioxin/Furan		8280(1)
	Priority Pollutant VOCs	5010/5020/5030(1)	8240(1)
	Priority Pollutant B/N/As (2)	3540/3550(1)	8270(1)
Air	Total Particulate PCBs		5503(3)
	Vaporous PCBs		5503(3)
Groundwater	Total PCBs	3510/3520(1)	8080(1)
	Dioxin/Furan	8280	8280(1)
	Priority Pollutant		
	Volatiles	5010/5020/5030(1)	8240(1)
Surface Water	Total PCBs	3510/3520(1)	8080(1)
	Dioxin/Furan	8280	8280(1)
Concrete Core	Total PCBs	3540/3550(1)	8080(1)
	Dioxin/Furan	8280	8280(1)
Surface Wipe	Total PCBs	3540/3550(1)	8080(1)
	Dioxin/Furan		8280(1)

Notes:

1. Test Methods for Evaluating Solid Waste - Physical/Chemical Methods, Second Edition, SW-846, United States Environmental Protection Agency, 1984.
2. Base, neutral and acid extractable compounds.
3. NIOSH Manual of Analytical Methods, Volume 1, Third Edition, NIOSH Publication No. 84-100, U.S Department of Health and Human Services.

TABLE 4.2

ANALYTICAL METHODS FOR GENERAL WATER QUALITY PARAMETERS

<u>Parameter</u>	<u>Method Reference</u>	<u>Targeted * Detection Limits</u>
<u>Water</u> ^a		
Alkalinity	310 ^b	2.0 mg/L
Bicarbonate	310 ^b	2.0 mg/L
Carbonate	310 ^b	2.0 mg/L
Hardness	130 ^b	2.0 mg/L
Sulfate	375 ^b	10.0 mg/L
Chloride	325 ^b	2.0 mg/L
Magnesium	242 ^b	0.5 mg/L
Potassium	251 ^b	1.0 mg/L
Sodium	375 ^b	1.0 mg/L
Total Dissolved Solids (TDS)	160 ^b	1.0 mg/L

a Monitoring wells and surface water.

b Methods for Chemical Analysis of Water and Wastes,
EPA-600/4-79-020, Revised March 1983.

* Specific detection limits are highly matrix dependent.
The detection limits listed herein are provided as a
guideline and may not always be achievable.

accordance with CLP protocols. Quality assurance/quality control protocols, consistent with the intent of the CLP protocols, were followed for all other sample analyses.

All samples submitted to Hazelton Laboratories for dioxin/furan analyses were analyzed in strict accordance with CLP protocols.

4.3 QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES

4.3.1 General

The overall QA/QC objective was to develop and implement procedures for field sampling, chain of custody, laboratory analysis and reporting that would provide accurate and precise data for the investigative sampling. Specific procedures used for sampling, chain of custody, calibration, laboratory analyses, reporting, quality control, preventative maintenance and corrective actions are presented in other sections of this report.

The purpose of this section is to define the goals set for the level of QA effort; accuracy, precision and sensitivity of analyses; and completeness, representativeness, and comparability of measurement data from the analytical laboratories. In addition, QA objectives for field measurements are also discussed.

4.3.2 Level of QA Effort

To assess the quality of data resulting from the sampling program, field duplicate, field blank and duplicate matrix spike samples were collected and submitted to the analytical laboratories. Field blank samples were analyzed to check procedural contamination and/or ambient conditions and/or sample container contamination at the site. Field duplicate samples were analyzed to check for sampling and analytical precision. Laboratory matrix spike samples were analyzed in duplicate at the same spike levels to check for analytical precision and reproducibility. The specific level of field QA effort for this sampling program, itemized by sample matrix and parameter, is summarized in Table 4.3.

Where appropriate, surface water, stream sediment, surface wipe, air, soil and groundwater samples collected at the site were analyzed in a manner consistent with CLP RAS protocols. The level of laboratory QA effort for the samples analyzed in a manner consistent with the intent of CLP RAS protocols is specified in the appropriate CLP Statement of Work (SOW), SOW 985, Modification 10 for organics, SOW 784, Modification 7 for inorganics and Statement of Work for Dioxin Analysis, IFB AM.1 (12/29/83) for TCDD.

TABLE 4.3
LEVEL OF FIELD QA/QC

<u>Matrix</u>	<u>PCB</u>	<u>VOC</u>	<u>BNA</u>	<u>Metals</u>	<u>Dioxin</u>	<u>General</u>
A) <u>Blind Duplicates</u>						
Groundwater	2	2	-	2	1	2
Surface Water	2	-	-	-	-	-
Sediment	2	-	-	1	-	-
Air	2	-	-	-	-	-
Soil	19	2	2	9	2	-
	—	—	—	—	—	—
Totals	27	4	2	12	3	2
B) <u>Field Blanks</u>						
Groundwater	2	2	-	1	1	1
Surface Water	2	-	-	-	-	-
Sediment	2	-	-	-	-	-
Air	4	-	-	-	-	-
Soil	16	1	1	2	1	-
	—	—	—	—	—	—
Totals	26	3	1	3	2	1

During the first sampling round, all groundwater samples were analyzed for additional water quality parameters. The methods employed for the analysis of these parameters are summarized in Table 4.2. The methods employed for dioxin/furan are summarized in Table 4.1. The level of laboratory QA effort for dioxin/furan involved analysis of one preparation blank (liquid) at the time of analysis of investigative samples.

4.3.3 Accuracy, Precision and Sensitivity of Analyses

The fundamental QA objective with respect to accuracy, precision, and sensitivity of laboratory analytical data was to achieve the QC acceptance criteria of the analytical protocols. The accuracy and precision requirements for samples analyzed in a manner consistent with the CLP RAS protocols are specified in the appropriate CLP SOWs discussed in Section 4.3.2.

The accuracy and precision requirements for the additional water, stream sediment and soil quality parameters are in accordance with the specified EPA methods. Table 4.2 lists the analytical method references and sensitivities required for the additional water quality parameters.

4.3.4 Completeness, Representativeness and Comparability

As required by the EPA, the samples analyzed for organics, inorganics and dioxin/furan were analyzed in a manner consistent with CLP protocols. These protocols require that the data meet the QA/QC acceptance criteria for 95 percent of all samples tested. Completely valid data for additional water, air, stream sediment and soil quality parameters and physical parameters should also be provided. The reasons for any variances from completeness (i.e. data not within the acceptable QA/QC limits) is documented in Section 5.

5.0 DATA VALIDATION

5.1 GENERAL

The following Sections discuss the validation of results reported by the contract laboratories in accordance with the Quality Assurance Project Plan.

The evaluation of the analytical data was based on the information provided in the reports from both of the contract laboratories involved, including: field blank data, lab blank data, duplicate data, as well as recovery data from matrix and surrogate spikes. The analytical data was assessed for consistency, accuracy and precision based on the review of the recovery data as well as the comparability of the duplicate analyses.

The final analytical reports from each of the contract laboratories were also checked for legibility, completeness, correctness and the presence of necessary dates, initials and signatures.

5.2 HOLDING TIMES

Based on the contract specifications outlined in the QAPP for this project, the following holding time requirements were applied:

PCBs: - extraction within 7 days of collection
- analysis within 40 days of collection

VOCs: - analysis of water samples within 10 days of collection
- analysis of soil samples within 7 days of collection

BNAs: - extraction within 7 days of collection
- analysis within 40 days of collection

Dioxin/Furan: - extraction within 15 days of collection
- analysis within 45 days of collection

The sample retention times were evaluated by comparing the sampling dates listed on the appropriate Chain of Custody Forms with the dates of extraction and/or analysis reported by the laboratories. Of the samples submitted for Base-Neutral/Acid analyses, two of the soil samples exceeded the requisite holding times. Sample I.D. 1916-S-32B had its holding time exceeded due to Wadsworth's initial confusion

over the requirements of the "A" and "B" samples. The second sample (1916-S-049A) was initially extracted within the allowed holding time but contained two distinct phases. Consequently, this sample was re-extracted after the required holding period.

In addition, two of the soil samples submitted for PCB analysis (1916-S-022A and 1916-S-022B) had their extraction holding times exceeded. As a result, the data associated with the samples are considered estimated only.

5.3 MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSES

Based on the Matrix Spike/Matrix Spike Duplicate (MS/MSD) data reported, the spiked samples generally yielded recoveries within the prescribed control limits, as well as acceptable reproducibility for most of the samples. Samples which had recoveries outside the acceptable limits are listed on Table 5.1. However, no action is required to be taken on MS/MSD data alone to qualify an entire case. Various effects unique to each matrix may perturb instrument response for certain analytes, resulting in apparent recoveries outside the acceptable limits.

TABLE 5.1

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES

<u>Sample I.D.</u>	<u>Compound</u>	<u>% Recovery</u>		
		<u>MS</u>	<u>MSD</u>	<u>QC Limits</u>
1) 1916-GS1	Lindane	38*	39*	46 - 127
	Dieldrin	29*	29*	31 - 134
	Endrin	32*	32*	42 - 139
2) 1916-GW9	Aldrin	119	145*	40 - 120
	4,4'-DDT	138*	121	38 - 127
3) 1916-GW12	Dieldrin	138*	119	52 - 126
	4,4'-DDT	132*	109	38 - 127
4) 1916-SD-009B	Lindane	33*	36*	46 - 127
	Dieldrin	25*	31	31 - 134
	Endrin	27*	34*	42 - 139
5) 1916-S-006A2	Lindane	31*	30*	46 - 127
	Dieldrin	25*	26*	31 - 134
	Endrin	28*	28*	42 - 139
6) 1916-S-023B	n-Nitrosodi-n-propylamine	39*	46	41 - 126
7) 1916-S-093A	Dieldrin	27*	74	31 - 134
	Endrin	29*	66	42 - 139
8) 1916-S-112B	Aldrin	135*	125*	40 - 120
	Lindane	39*	30*	46 - 127

* Outside of the prescribed control limits.

5.4 COMPOUND IDENTIFICATION

The contract laboratory responsible for the analysis of the samples for PCB content (Wadsworth/Alert Laboratories, Inc.) used pattern recognition rather than retention time windows for the designated chromatographic peaks characteristic of the individual Arochlor isomers.

5.5 LABORATORY/REAGENT BLANKS

Laboratory blank analyses are normally used to determine the existence and extent of any sample contamination problems associated with the analytical process.

The evaluation guidelines stipulate that laboratory reagent blanks contain less than the Contract Required Detection Limited (CRDL) of any Hazardous Substance List (HSL) compound with the exception of methylene chloride, acetone, 2-butanone and toluene, presumably due to their ubiquitous nature. In addition, the guidelines further state that if the blanks contain a concentration of less than five times the CRDL for any individual compound, then the concentration should be reported as 'not detected (ND)' for that compound.

Based on this criteria, all of the laboratory/reagent blank analyses performed by the contract laboratories for this project contained acceptable concentrations of all targeted compounds. Therefore, the associated sample data requires no qualifications or further comment.

5.6 SURROGATE RECOVERY

According to the EPA Functional Guidelines for Evaluating Organics Analyses, if Surrogate Spike Recoveries are out of specification on initial analysis, but meet the criteria on re-analysis, the results of the re-analysis (providing they are within the specified limits) are used for evaluation purposes.

Six of the water samples analyzed for Hazardous Substance List volatile compounds had their associated Bromofluorobenzene (BFB) surrogate recoveries outside of the Contract Required Recovery Limits of 86-115 percent. However, when the samples in question were reanalyzed the recoveries of the BFB were well within the prescribed control limits.

Approximately 46 percent of the PCB samples analyzed had values reported for the Dibutylchloroendate

surrogate recovery outside the prescribed Contract Required Recovery Limits of 24-154 percent for water and 20-150 percent for soil/sediment. The USEPA Functional Guidelines recommend its use as a surrogate for this type of analyses but caution that these limits are for advisory purposes only and should not be used to determine if the sample should be reanalyzed. The guidelines also state that no specific action is required if the dibutylchloroendate recoveries are out of specification.

5.7 FIELD QA/QC

Tables 5.2 and 5.3 provide a list of the blind duplicate and field blank samples submitted to the contract laboratories by Conestoga-Rovers & Associates. The total number of field QA/QC samples submitted, by parameter, are as follows:

<u>PARAMETER</u>	<u>BLANKS</u>	<u>DUPLICATES</u>
PCB	26	27
VOC	3	4
BNA	1	2
Metals	3	12
Dioxin	2	3
General	1	2

(Note: General parameters identified on Table 4.2)

TABLE 5.2

BLIND DUPLICATES

<u>Matrix</u>	<u>Sample #</u>	<u>Identification</u>	<u>Parameters</u>
Groundwater	GW8	Duplicate of GW6	PCB, VOC, Metals, General and Dioxin
	GW9	Duplicate of GW3	PCB, VOC, Metals, General
Surface Water	SW-003	Duplicate of SW-002	PCB
	SW-014	Duplicate of SW-013	PCB
Sediments	SD-003	Duplicate of SD-002	PCB and Metals
	SD-014	Duplicate of SD-013	PCB
Air	1916-3	Duplicate of 1816-2	PCB A and B
Soil	S-058	Duplicate of S-021	BNA A and B, Metals A and B, PCB A and B, VOC A and B and Dioxin A and B
	S-108	Duplicate of S-081	PCB A and B
	S-109	Duplicate of S-061	PCB A and B
	S-111	Duplicate of S-069	PCB A, B and C, and Metals A, B and C
	S-113	Duplicate of S-090	PCB A and B
	S-115	Duplicate of S-097	PCB A and B, and Metals A and B
	S-117	Duplicate of S-107	PCB A and B, and Metals A and B
	S-119	Duplicate of S-038	PCB A and B
	S-121	Duplicate of S-049	PCB A and B

TABLE 5.3

FIELD BLANKS

<u>Matrix</u>	<u>Sample #</u>	<u>Identification</u>	<u>Parameters</u>
Groundwater	GW10	Water Blank	PCB and VOC
	GW11	Bailer Rinse	PCB, VOC, Metals, General and Dioxin
Surface Water	SW-007	Blank for SW-002	PCB A
	SW-022	Blank for SW-013	PCB A
Sediments	SD-007	Blank for SD-002	PCB A
	SD-022	Blank for SD-013	PCB A
Air	1916-6	Field Blank	PCB A and B
	1916-7	Trip Blank	PCB A and B
Soil	S-059	Blank for S-021	PCB, VOC and BNA
	S-060	Envirotest Bottle Blank	PCB
	S-110	Blank for S-062061	PCB A and B
	S-112	Blank for S-069069	PCB A and B, and Metals A and B
	S-114	Blank for S-090	PCB A and B
	S-116	Blank for S-097	PCB A and B
	S-118	Blank for S-107	PCB A and B
	S-120	Blank for S-038	Dioxin
	S-122	Blank for S-048	PCB A and B
	S-123	Blank for S-049	PCB A and B

The quality control samples were collected at a frequency greater than originally outlined in the QAPP. The data associated with the analysis of these samples is reported in Section 6.0 of this report.

5.7.1 Field Blanks

Generally, the field blanks submitted to the contract laboratories indicated no apparent sources of contamination of the samples via carry-over, sampling protocols, high ambient background or laboratory introduced contaminants. Field blank data is detailed as follows:

- One of the sediment field blank samples (SD-007) contained 6 ug/L of Arochlor 1248. A second sediment blank (SD-022) contained no Arochlors.
- Of the samples submitted as field blanks for the soil samples, one sample (S-060) (submitted as an Envirotech bottle blank) contained Arochlor 1254 at a concentration of 10 ug/L. Samples S-112 and S-116 (used as Wadsworth Bottle blanks) both contained 1.0 ug/L of Arochlor 1254.
- Of the samples submitted as field blanks for the volatile parameters, two samples (GW-10, a field blank; and GW-11, a bailer rinse) contained no detectable analytes. However, a

third sample (S-059, a field blank) had reported methylene chloride at 19 ug/L and chloroform at 8.0 ug/L. As these compounds are common laboratory solvents, their presence in field blanks is probably the result of low-level laboratory contamination.

5.7.2 Field Duplicates

The analyses of field duplicates, submitted blind to the contract laboratories, indicate that both Wadsworth and Hazelton generally provided data with acceptable precision. There were, however, some minor exceptions with a few of the associated samples.

Sediment sample SD-002A had reported concentrations of 2.0 mg/kg of Arochlor 1248 and 2.1 mg/kg of lead. However, its corresponding duplicate sample, SD-003A, had none of the targeted analytes at identical Method Detection Limits.

In addition, soil sample S-069A had a reported concentration of 2,200 mg/kg of Arochlor 1248 but only 820 mg/kg in the duplicate sample, S-111A, indicating poor analytical performance on this particular sample.

It should be noted, however, that it is difficult to ensure sample homogeneity when dealing with soil and sediment samples. Consequently, samples which are thought to be true duplicates may in fact be very different in nature. This may account for much of the variations in the data reported for duplicate soil and sediment samples.

5.8 OVERALL DATA ASSESSMENT

Based on the criteria outlined in the evaluation guidelines which were used to review the data generated, it is apparent that the data is acceptable, accurate and complete, with the exceptions and specific qualifications noted previously.

As a result, with these qualifications and recommendations duly noted, this data may be used for its original intended purpose as outlined in the Quality Assurance Project Plan.

6.0 ANALYTICAL RESULTS

6.1 GENERAL

The results of the analytical program are presented in the following Tables in Appendix A:

Table A-1	PCB Concentrations - Soil Samples
Table A-2	PCB Concentrations - Sediment Samples
Table A-3	PCB Concentrations - Surface Water Samples
Table A-4	PCB Concentrations - Concrete Core Samples
Table A-5	PCB Concentrations - Air Samples
Table A-6	PCB Concentrations - Wipe Samples
Table A-7	Dioxin Concentrations - Soil Samples
Table A-8	Dioxin Concentrations - Sediment Samples
Table A-9	Dioxin Concentrations - Surface Water Samples
Table A-10	Furan Concentrations - Soil Samples
Table A-11	Furan Concentrations - Sediment Samples
Table A-12	Furan Concentrations - Surface Water Samples
Table A-13	Lead and Cadmium Concentrations - Soil Samples
Table A-14	Lead and Cadmium Concentrations - Sediment Samples
Table A-15	pH, Conductivity, Dissolved Oxygen - Surface Water Samples
Table A-16	Volatile Organic Compounds - Soil Samples
Table A-17	Base/Neutral Acid Extractables - Soil Samples

PCB concentrations for soil and sediment samples collected are illustrated on Plan 2; dioxin/furan concentrations in soil and sediment are illustrated on Plan 3; and, lead and cadmium concentrations are illustrated on Plan 4.

Total PCB concentrations and total dioxin/furan concentrations in surface water samples are

presented in Figure 6.1. Total PCB concentrations in air samples are presented in Figure 6.2.

6.2 SOIL SAMPLES

PCB concentrations in soil samples varied significantly throughout the site. The highest PCB concentrations in soils were found in the areas adjacent to the northern portion of the concrete slab and extending into the apparent disposal areas. PCB concentrations in this area ranged from non-detect to 25,200 parts per million (ppm).

PCB concentrations in samples collected west of the existing fence line ranged from non-detect to 15.8 ppm. Of the samples collected east of the site fence, ten were analyzed as non-detect; eight had PCB concentrations between non-detect and 2.5 ppm; two had PCB concentrations between 5 and 10 ppm; and Sample Nos. 16 and 26, located adjacent to the area north of the slab, had PCB concentrations in excess of 3,400 ppm in both the upper and lower soil samples.

The background sample collected south of the site contained no detectable PCBs.

Dioxin/furan concentrations in soils ranged from non-detect to 4.55 parts per billion (ppb) for dioxin and non-detect to 306.1 ppb for furans. The background sample had a reported concentration of 0.98 ppb of dioxin. In general, the location of samples containing elevated levels of dioxin/furan coincides with the areas where residual PCB concentrations, in excess of 10,000 ppm, were detected.

Detected levels of cadmium ranged from 0.35 ppm to 0.85 ppm. The average concentration of lead detected in the soils was 17 ppm; the highest lead concentration detected was 140 ppm. The lead and cadmium concentrations are generally at or below accepted background concentrations for these parameters.

VOCs detected in soils include methylene chloride, acetone, trichloroethene, tetrachloroethene, ethylbenzene and total xylenes. All compounds were detected at relatively low concentrations, not exceeding 1,200 ug/kg.

6.3 CONCRETE CORE SAMPLES

All five concrete cores, collected from the existing concrete slab, were analyzed for PCBs. Total PCB concentrations and core locations were as follows:

<u>Sample</u>	<u>Total PCB Concentration</u>	<u>Location</u>
Core No. 1	non-detect	south central portion of slab
Core No. 2	20 ppm	eastern edge at center of slab
Core No. 3	2 ppm	north central portion of slab
Core No. 4	8,700 ppm	northwest corner of slab
Core No. 5	10 ppm	northeast corner of slab

PCB concentrations in soil samples collected beneath the concrete slab were all non-detect with the exception of core location No. 4 where 0.8 ppm of PCBs were reported in the underlying soil.

6.4 SEDIMENT SAMPLES

PCB concentrations in sediment samples ranged from non-detect to 2,240 ppm. The highest concentration of 2,240 ppm was detected in sample No. SD-501, located in the ravine upstream of the apparent disposal area and due north of the Superior Moving and Storage warehouse. Sediment samples collected adjacent to the apparent disposal areas ranged from 1.86 ppm to 960 ppm. Samples collected from the ravine, downstream of the sediment trap, ranged from 0.1 ppm

to 19.5 ppm, with the exception of Sample SD-15 which had a reported PCB concentration of 2,000 ppm. Two sediment samples collected from Little Sugar Creek contained PCB. Sample SD-5 had a total PCB concentration of 1 ppm; sample SD-2 had a total PCB concentration of 2 ppm; sample SD-3, a duplicate of SD-2, had no detectable PCBs.

Total furan concentrations of 0.19 ppb were reported in the background sediment sample collected in Little Sugar Creek. Dioxin/furans were not detected in any sediment sample collected other than the background sample.

6.5 SURFACE WATER

No detectable concentrations of dioxins, furans or PCBs were found in surface water samples collected from Little Sugar Creek. Water samples collected from the ravine had PCB concentrations ranging from 7 ug/L to 620 ug/L with a mean concentration of 41 ug/L. Surface water flow in the ravine was minimal during collection of the surface water samples and most samples were collected from shallow, stagnant pools.

Water samples collected from the inverts of two drainage pipes which discharge into the ravine had total PCB concentrations of 28 and 73 ug/L.

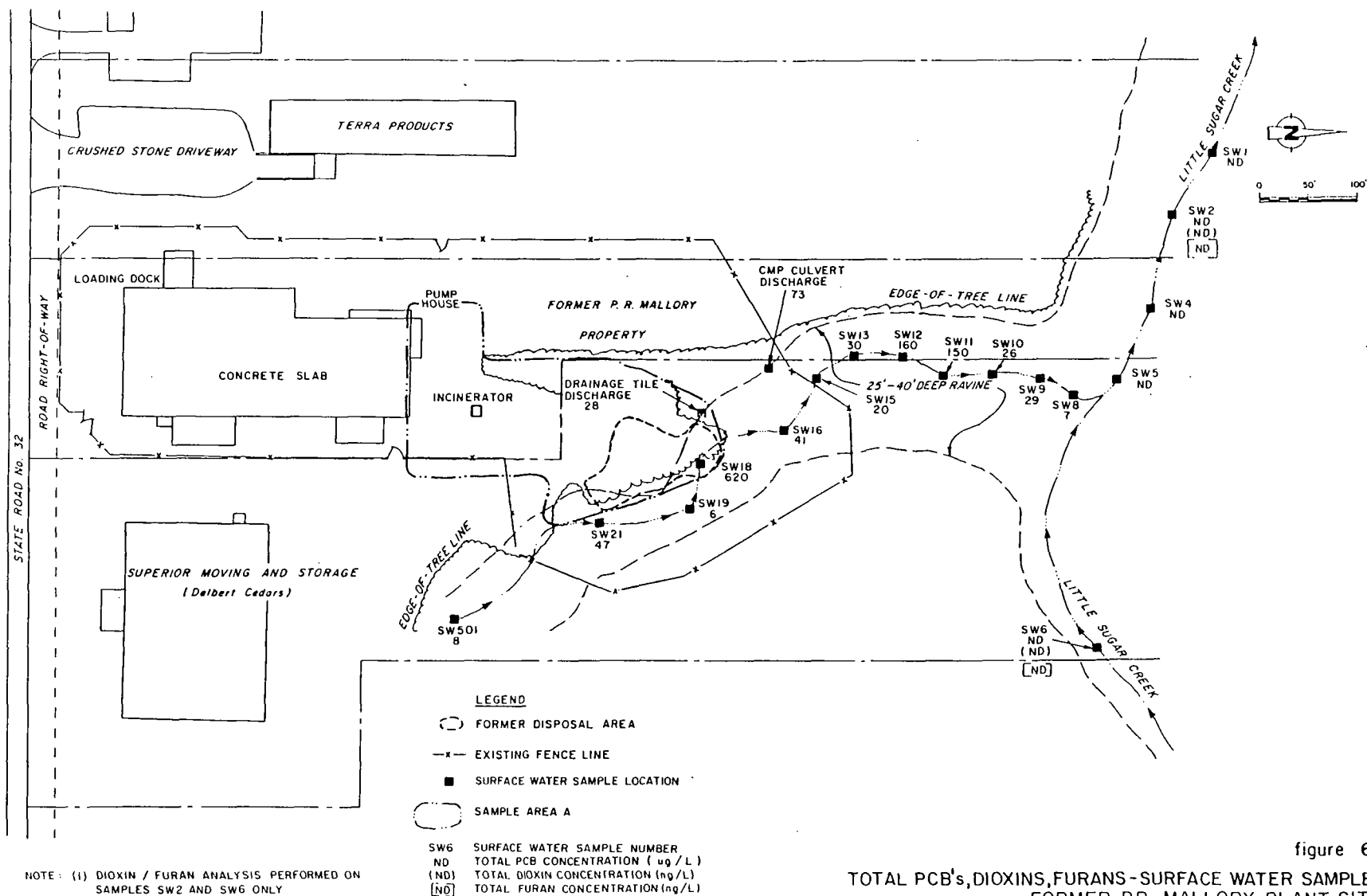


figure 6.1
TOTAL PCB's, DIOXINS, FURANS - SURFACE WATER SAMPLES
FORMER P.R. MALLORY PLANT SITE
Crawfordsville, Indiana

6.6 AIR SAMPLES

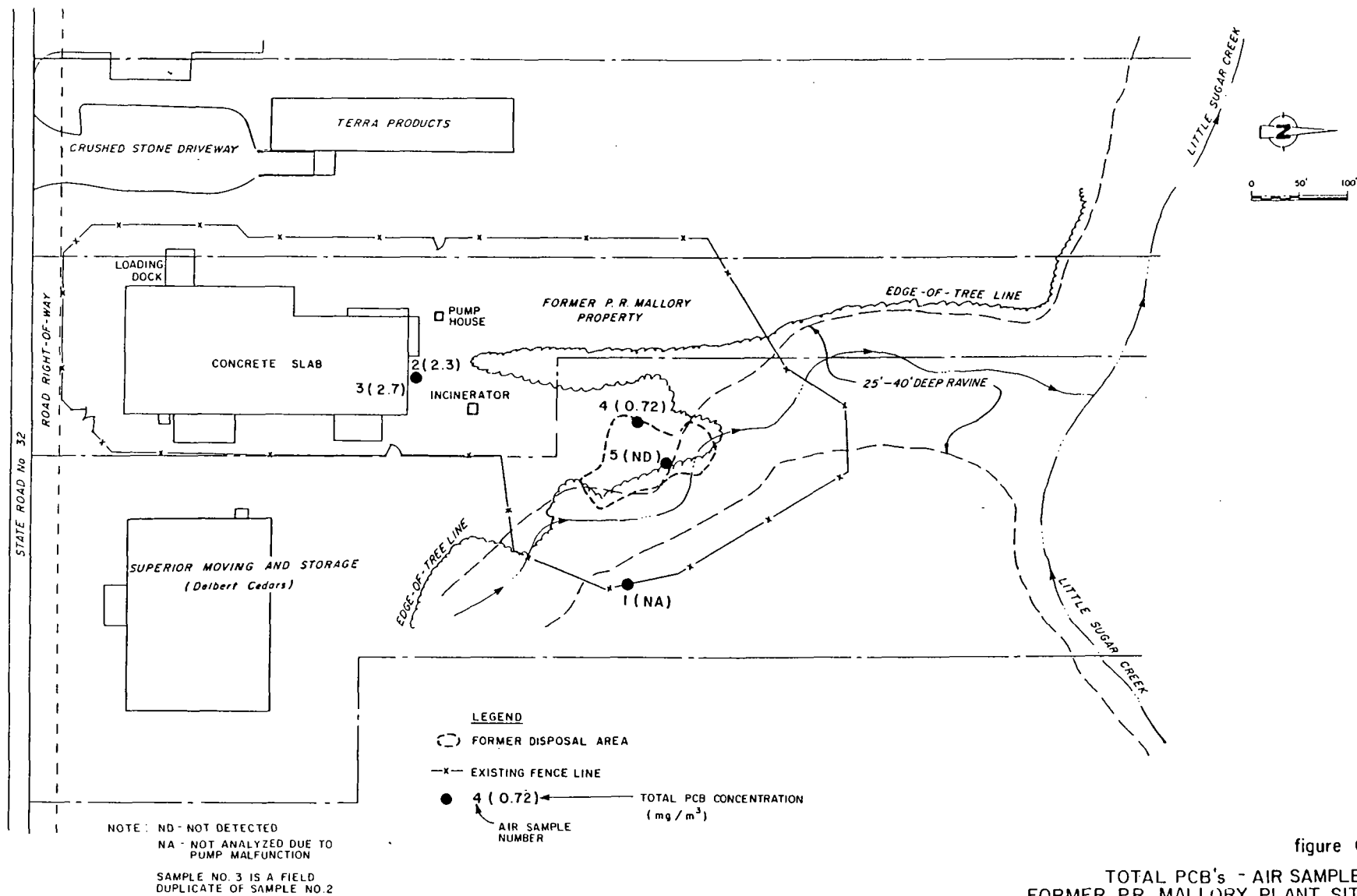
Total PCB concentrations in air samples collected prior to initiation of Phase I remedial construction activities ranged from non-detect to 2.7 mg/m³. The high concentration of 2.7 mg/m³ was detected at the northern edge of the existing concrete slab. A PCB concentration of 0.72 mg/m³ was detected in one of the samples collected from the apparent disposal area; a second sample collected from the area contained no detectable PCBs.

A background sample was not collected due to failure of the sample pump.

6.7 WIPE SAMPLES

Wipe samples collected from the metal debris, following removal from the ravine area and steam cleaning, indicated PCBs were present in total concentrations ranging from 1.3 ug/100 cm² to 7.1 ug/100 cm².

Two wipe samples collected from scrap metal located on Superior Moving's truck parking area, adjacent to the site, showed total PCB concentrations of



0.93 ug/100 cm² and 0.27 ug/100 cm². This scrap metal had not been steam cleaned prior to sampling.

Analysis showed that in all cases, only the 1254 PCB Arochlor was present.

6.8 GROUNDWATER SAMPLES

The groundwater sampling and analysis program is presented in a report entitled "Interim Report, Hydrogeological Investigation, Former P.R. Mallory Plant Site, Crawfordsville, Indiana", March 1987, by Conestoga-Rovers & Associates.

7.0 HEALTH AND SAFETY

7.1 GENERAL

Sample collection at the former P.R. Mallory plant site involved contact with soils that were potentially contaminated with hazardous materials. All site operations conformed to the provisions of the Health and Safety Plan presented herein.

The Health and Safety Plan ensured a safe and minimal risk work environment for the on-site personnel and minimized the impact of sampling activities on the public and the environment. The safety and health of the public and on-site personnel, and the protection of the environment took precedence over cost and schedule considerations for all sampling work.

All personnel on site for the soil sampling program were capable of and familiar with the use of safety, health, respiratory and protective equipment and with the safety and security procedures required for this site.

7.2 WORK AREAS

The work areas for the Phase I Sampling and Analysis Program were consistent with the work areas defined for the Phase I Remedial Construction. The work areas were defined as follows:

- 1) Exclusion Zone (Contaminated Zone) - This zone included all areas where potentially contaminated soils, debris and material were being excavated, handled, spoiled or covered, and all areas where contaminated equipment or personnel travelled.

The level of personnel protective equipment required in this area was full USEPA Level C Protection, modified to include the use of Saranex-coated Tyvek coveralls.

The Exclusion Zone was clearly delineated in the field by temporary snow fencing. Additional temporary Exclusion Zones were set up around each monitoring well location during the drilling and development of the wells.

- 2) Contamination Reduction Zone - This zone was set up at the interface of the Exclusion Zone and Clean Zone and provided for the transfer of materials from clean to site-dedicated equipment, the decontamination of equipment and vehicles prior to entering the Clean Zone,

the decontamination of personnel and clothing prior to entering the Clean Zone, and for the physical segregation of the Clean Zone and the Exclusion Zone.

- 3) Clean Zone - This area encompasses the remainder of the site and is defined as being an area outside the zone of significant air, soil or surface water contamination. The Clean Zone was clearly delineated and procedures implemented to prevent active or passive contamination from the work site. The function of the Clean Zone included:

- 1) An entry area for personnel, material and equipment to the Contamination Reduction Zone;
- 2) An exit area for decontaminated personnel, materials and equipment from the Contamination Reduction Zone;
- 3) The housing of site specific services; and
- 4) A storage area for clean safety and work equipment.

7.3 EMERGENCY AND FIRST AID EQUIPMENT

During the sampling program, the following emergency and first aid equipment was available for use by site personnel, and was located in the Contamination Reduction Zone during Phase I construction activities:

- i) twenty pound ABC type dry chemical fire extinguishers,
- ii) portable emergency eye wash, and
- iii) OSHA-approved first aid kit.

7.4 PERSONNEL PROTECTION EQUIPMENT

All sampling personnel were equipped with the following protective clothing and equipment in accordance with U.S.E.P.A. Level C Protection requirements:

1. Air purifying respirator, full-face, cartridge equipped (MSHA/NIOSH approved), cartridges used were approved for high efficiency particulates and organic vapors;
2. Disposable, splash resistant, chemical resistant Saranex-coated Tyvek coveralls;
3. Disposable nitrile gloves and disposable latex gloves;
4. Boots, chemical resistant, steel-toe and shank; and
5. Chemical resistant rubber overboots.

Coveralls, gloves and respiratory cartridges were disposed of as outlined in Section 3.3.

All sampling personnel had passed a required respiratory fit test before entering the Exclusion Zone to begin sampling.

APPENDIX A

ANALYTICAL RESULTS

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS															
Sample Number		Detection		Detection		Detection		Detection		Detection		Detection		Detection	
		1016	Limit	1221	Limit	1232	Limit	1242	Limit	1248	Limit	1254	Limit	1260	Limit
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-S-001A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-002A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-003A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-004A	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-005A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-006A	(1)	ND	10	ND	10	ND	10	ND	10	110		ND	10	ND	10
-006-2A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-006-2B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-007A	(1)	ND	10	ND	10	ND	10	ND	10	45		30		ND	10
-008A	(1)	ND	5	ND	5	ND	5	ND	5	30		25		ND	5
-008-2A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-008-2B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-009A	(1)	ND	10	ND	10	ND	10	ND	10	110		ND	10	ND	10
-009-2A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-009-2B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-010A	(1)	ND	15	ND	15	ND	15	ND	15	160		ND	15	ND	15
-010B	(1)	ND	5	ND	5	ND	5	ND	5	39		ND	5	ND	5
-011A	(1)	ND	500	ND	500	ND	500	ND	500	4300		ND	500	ND	500
-012A	(1)	ND	2000	ND	2000	ND	2000	ND	2000	19000		ND	2000	ND	2000
-012B	(1)(3)	ND	400	ND	400	ND	400	ND	400	3700		ND	400	ND	400
-013A	(1)	ND	70	ND	70	ND	70	ND	70	700		ND	70	ND	70
-013B	(1)	ND	1	ND	1	ND	1	ND	1	5		3		ND	1
-014A	(1)	ND	10	ND	10	ND	10	ND	10	ND	10	120		ND	10
-014B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	4		ND	1
-015A	(1)	ND	1000	ND	1000	ND	1000	ND	1000	9200		16000		ND	1000
-015B	(1)	ND	50	ND	50	ND	50	ND	50	ND	50	800	50	ND	50

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
	1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)
CRA-1916-S-016A	ND	200	ND	200	ND	200	ND	200	ND	400	4700		ND	880
-016B	ND	200	ND	200	ND	200	ND	200	ND	400	11000		ND	1100
-017A (1)	ND	5	ND	5	ND	5	ND	5	33		ND	5	ND	5
-017B (1)	ND	1	ND	1	ND	1	ND		5		ND	1	ND	1
-018A (1)	ND	2	ND	2	ND	2	ND	2	ND	2	38		ND	2
-018B (1)	ND	1	ND	1	ND	1	ND	1	ND	1	19		ND	1
-019A (1)	ND	1500	ND	1500	ND	1500	ND	1500	ND	1500	16000		ND	1500
-019B (1)(3)	ND	100	ND	100	ND	100	ND	100	ND	100	700		ND	100
-020A (1)	ND	200	ND	200	ND	200	ND	200	ND	200	2200		ND	200
-020B (1)	ND	100	ND	100	ND	100	ND	100	1100		ND	100	ND	100
-021A (1)	ND	1200	ND	1200	ND	1200	ND	1200	12500		ND	1200	ND	1200
-021B (1)	ND	1400	ND	1400	ND	1400	ND	1400	14000		ND	1400	ND	1400
-022A	ND	1.70	ND	1.70	ND	1.70	ND	1.70	30.0		ND	3.40	ND	3.40
-022B	ND	1.30	ND	1.30	ND	1.30	ND	1.30	4.30		ND	2.70	ND	2.70
-023A (1)	ND	50	ND	50	ND	50	ND	50	730		ND	50	ND	50
-023B (1)	ND	5	ND	5	ND	5	ND	5	20		20		ND	5
-024A (1)	ND	300	ND	300	ND	300	ND	300	ND	300	3400		ND	300
-024B (1)	ND	10	ND	10	ND	10	ND	10	100		120		ND	10
-025A (1)	ND	50	ND	50	ND	50	ND	50	650		600		ND	50
-025B (1)	ND	10	ND	10	ND	10	ND	10	75		ND	10	ND	10
-026A	ND	1200	ND	1200	ND	1200	ND	1200	8400		ND	460	ND	230
-026B	ND	840	ND	840	ND	840	ND	840	3400		ND	530	ND	530
-027A (1)	ND	1	ND	1	ND	1	ND	1	9		4		ND	1
-027B (1)	ND	1200	ND	1200	ND	1200	ND	1200	12000		ND	1200	ND	1200
-028A (1)	ND	200	ND	200	ND	200	ND	200	ND	200	2400		ND	200
-028B (1)	ND	50	ND	50	ND	50	ND	50	ND	50	450		ND	50
-029A (1)	ND	250	ND	250	ND	250	ND	250	2600		1600		ND	250

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS													
Sample Number		Detection		Detection		Detection		Detection		Detection		Detection	
		1016	Limit	1221	Limit	1232	Limit	1242	Limit	1248	Limit	1254	Limit
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-S-029B	(1)	ND	30	ND	30	ND	30	ND	30	320		ND	30
-030A	(1)	ND	5	ND	5	ND	5	ND	5	50		ND	5
-030B	(1)	ND	5	ND	5	ND	5	ND	5	60		ND	5
-031A	(1)	ND	50	ND	50	ND	50	ND	50	375		100	50
-031B	(1)	ND	5	ND	5	ND	5	ND	5	40		ND	5
-032A	(1)	ND	25	ND	25	ND	25	ND	25	200		70	25
-032B	(1)	ND	150	ND	150	ND	150	ND	150	1500		1100	150
-033A	(1)	ND	50	ND	50	ND	50	ND	50	300		80	50
-033B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-034A	(1)	ND	50	ND	50	ND	50	ND	50	500		ND	50
-034B	(1)	ND	1	ND	1	ND	1	ND	1	2		2	1
-035A	(1)	ND	10	ND	10	ND	10	ND	10	86		ND	10
-035B	(1)	ND	1	ND	1	ND	1	ND	1	2		ND	1
-036A	(1)	ND	10	ND	10	ND	10	ND	10	100		ND	10
-036B	(1)	ND	300	ND	300	ND	300	ND	300	ND	300	2700	300
-037A		ND	1.50	ND	1.50	ND	1.50	ND	1.50	160		ND	1.80
-037B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.200		ND	0.160
-038A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.110		ND	0.160
-038B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.100		ND	0.160
-039A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.550	0.160
-039B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160
-040A		ND	36.0	ND	36.0	ND	36.0	ND	36.0	ND	36.0	550	72.0
-040B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.190		0.190	0.160
-041A		ND	190	ND	93.0	ND	190	ND	190	ND	190	2700	1900
-041B		ND	0.080	ND	0.080	ND	0.080	ND	0.150	ND	0.150	0.240	0.150
-042A		ND	29.0	ND	29.0	ND	29.0	ND	290	ND	290	1200	570
-042B		ND	27.0	ND	27.0	ND	27.0	ND	54.0	ND	54.0	920	540

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
	1016	Limit	1221	Limit	1232	Limit	1242	Limit	1248	Limit	1254	Limit	1260	Limit
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-S-043A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-043B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-044A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	0.640		ND	0.160
-044B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-045A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-045B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-046A	ND	0.580	ND	0.290	ND	0.580	ND	2.900	ND	2.900	65.0		ND	11.000
-046B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.190		ND	0.160
-047A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-047B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-048A	ND	390	ND	390	ND	390	ND	390	ND	770	8,500		ND	770
-048B	ND	370	ND	370	ND	370	ND	370	ND	750	4,500		ND	750
-049A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.210		ND	0.160
-049B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-050A	ND	31.0	ND	31.0	ND	31.0	ND	31.0	ND	31.0	280		ND	62.0
-050B	ND	0.230	ND	0.230	ND	0.230	ND	0.520	ND	0.520	2.00		ND	0.520
-051A	ND	0.090	ND	0.090	ND	0.090	ND	0.180	ND	0.180	1.10		ND	0.180
-051B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.180		ND	0.160
-052A	ND	0.700	ND	0.700	ND	0.700	ND	0.700	ND	1.40	32.0		ND	1.40
-052B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.200		ND	0.160
-053A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	1.00		ND	0.160
-053B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-054A	ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.600	3.30		ND	0.600
-054B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	1.70		ND	0.160
-055A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-055B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-056A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
	1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)
CRA-1916-S-056B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-057A (1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-057B	NR		NR		NR		NR		NR		NR		NR	
-058A (D21A) (1)	ND	1500	ND	1500	ND	1500	ND	1500	14000		ND	1500	ND	1500
-058B (D21B) (1)	ND	1500	ND	1500	ND	1500	ND	1500	15000		ND	1500	ND	1500
-059A (BK21A) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-060A (BBK) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	10 ug/L		ND	1 ug/L
-061A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.540		0.250		ND	0.160
-061B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-062A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.690		0.400		ND	0.160
-062B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.130		ND	0.160	ND	0.160
-063A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.600		0.340		ND	0.160
-063B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.430		0.200		ND	0.160
-064A (1)	ND	1	ND	1	ND	1	ND	1	4		3		ND	1
-065A	ND	0.380	ND	0.380	ND	0.380	ND	0.380	5.60		ND	0.380	ND	0.380
-065B	ND	0.400	ND	0.400	ND	0.400	ND	0.400	4.10		ND	0.200	ND	0.200
-065C	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-066A	ND	0.300	ND	0.300	ND	0.300	ND	0.300	3.60		ND	0.160	ND	0.160
-066B	ND	0.100	ND	0.100	ND	0.100	ND	0.100	1.10		ND	0.160	ND	0.160
-066C	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.160		ND	0.160	ND	0.160
-067A	ND	0.200	ND	0.200	ND	0.200	ND	0.200	3.30		ND	0.200	ND	0.200
-067B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.100		ND	0.160	ND	0.160
-068A	ND	0.600	ND	0.600	ND	0.600	ND	0.600	17.0		ND	0.800	ND	0.800
-068B	ND	0.800	ND	0.800	ND	0.800	ND	0.800	25.0		ND	0.800	ND	0.800
-068C	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.290		ND	0.160	ND	0.160
-069A	ND	410	ND	410	ND	410	ND	410	2200		ND	210	ND	100
-069B	ND	0.970	ND	0.970	ND	0.970	ND	0.970	19.0		2.90		ND	0.580

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
	1016	Limit	1221	Limit	1232	Limit	1242	Limit	1248	Limit	1254	Limit	1260	Limit
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-S-069C	ND	1.600	ND	1.60	ND	1.60	ND	1.60	36.0		ND	0.350	ND	0.350
-070A	ND	360	ND	360	ND	360	14000		ND	360	ND	2300	ND	2300
-070B	ND	750	ND	750	ND	750	12000		ND	750	ND	300	ND	150
-070C	ND	2100	ND	2100	ND	2100	3000		ND	2100	ND	53.0	ND	53.0
-070D	ND	3.50	ND	3.50	ND	3.50	18.0		ND	3.50	ND	0.880	ND	0.880
-071A	ND	50.0	ND	50.0	ND	50.0		50.0	1000		ND	30.0	ND	30.0
-071B	ND	45.0	ND	45.0	ND	45.0	ND	45.0	630		ND	45.0	ND	45.0
-071C	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.380		ND	0.160	ND	0.160
-072A	ND	0.330	ND	0.330	ND	0.330	ND	0.330	6.50		ND	0.330	ND	0.330
-072B	ND	0.080	ND	0.080	ND	0.80	ND	0.080	0.220		ND	0.160	ND	0.160
-073A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.460		ND	0.250	ND	0.250
-073B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.520		ND	0.160	ND	0.160
-074A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.180		ND	0.160	ND	0.160
-074B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.091		ND	0.160	ND	0.160
-075A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.110		ND	0.160	ND	0.160
-075B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.082		ND	0.160	ND	0.160
-076A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.130		ND	0.160	ND	0.160
-076B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-077A (1)	ND	5	ND	5	ND	5	ND	5	40		ND	5	ND	5
-077B (1)	ND	1	ND	1	ND	1	ND	1	6		ND	1	ND	1
-078A (1)	ND	3	ND	3	ND	3	ND	3	30		ND	3	ND	3
-079A (1)	ND	1	ND	1	ND	1	ND	1	8		ND	1	ND	1
-079B (1)	ND	1	ND	1	ND	1	ND	1	8		ND	1	ND	1
-080A (1)	ND	10	ND	10	ND	10	ND	10	100		ND	10	ND	10
-080B (1)	ND	1	ND	1	ND	1	ND	1	1		ND	1	ND	1
-081A (1)	ND	1	ND	1	ND	1	ND	1	6		ND	1	ND	1
-081B (1)	ND	1	ND	1	ND	1	ND	1	3		ND	1	ND	1

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS															
Sample Number		Detection		Detection		Detection		Detection		Detection		Detection		Detection	
		1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)
CRA-1916-S-082A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-082B		NR		NR		NR		NR		NR		NR		NR	
-083A	(1)	ND	25	ND	25	ND	25	ND	25	200		100		ND	25
-083B	(1)	ND	5	ND	5	ND	5	ND	5	50		ND	5	ND	5
-084A	(1)	ND	1	ND	1	ND	1	ND	1	8		ND	1	ND	1
-084B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-085A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	4		ND	1
-085B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	2		ND	1
-086A	(1)	ND	2	ND	2	ND	2	ND	2	20		ND	2	ND	2
-086B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	5		ND	1
-087A	(1)	ND	25	ND	25	ND	25	ND	25	200		70		ND	25
-087B	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	3		ND	1
-088A	(1)	ND	300	ND	300	ND	300	ND	300	3000		ND	300	ND	300
-088B	(1)	ND	30	ND	30	ND	30	ND	30	300		ND	30	ND	30
-089A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.190		ND	0.160
-089B		ND	0.340	ND	0.340	ND	0.340	ND	0.340	ND	0.340	6.60		ND	2.00
-090A		ND	0.340	ND	0.340	ND	0.340	ND	0.340	ND	0.340	2.50		ND	1.00
-090B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.280		ND	0.160
-091A		ND	0.400	ND	0.400	ND	0.400	0.460		ND	0.400	1.40		ND	0.280
-091B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-092A		ND	0.660	ND	0.660	ND	0.660	ND	0.660	ND	0.660	9.00		ND	3.30
-092B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-093A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-093B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-094A		ND	0.200	ND	0.200	ND	0.200	ND	0.200	0.960		ND	0.300	ND	0.300
-094B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.120		ND	0.160	ND	0.160
-095A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
Sample Number	1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)
CRA-1916-S-095B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-096A	ND	0.150	ND	0.150	ND	0.150	ND	0.150	ND	0.380	1.90		ND	0.300
-096B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.540	2.00		ND	0.380
-097A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.490		ND	0.160	ND	0.160
-097B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-098A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.480		ND	0.160	ND	0.160
-098B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-099A	ND	0.300	ND	0.300	ND	0.300	ND	0.300	2.30		1.00		ND	0.300
-099B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-100A	ND	1.60	ND	1.60	ND	1.60	ND	1.60	13.0		2.80		ND	1.60
-100B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-101A	ND	1.70	ND	1.70	ND	1.70	ND	1.70	11.0		2.70		ND	1.70
-101B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-102A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.440		0.220		ND	0.160
-102B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-103A	ND	1.60	ND	1.60	ND	1.60	ND	1.60	8.30		ND	1.90	ND	1.90
-103B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-104A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.084		ND	0.160	ND	0.160
-104B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-105A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.400		0.210		ND	0.160
-105B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-106A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-106B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-107A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-107B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-108A (D81A) (1)	ND	1	ND	1	ND	1	ND	1	6		ND	1	ND	1
-108B (D81B) (1)	ND	1	ND	1	ND	1	ND	1	2		ND	1	ND	1

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

PCB AROCHLORS														
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection	
	1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)
CRA-1916-S-109A (D61A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.100		ND	0.160	ND	0.160
-109B (D61B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.590		0.430		ND	0.160
-110A (BK62A)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.001	ND	0.001
-110B (BK62B)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.001	ND	0.001
-111A (D69A)	ND	40.0	ND	40.0	ND	40.0	ND	40.0	820		ND	80.0	ND	80.0
-111B (D69B)	ND	1.30	ND	1.30	ND	1.30	ND	1.30	18.0		ND	0.950	ND	0.950
-111C (D69C)	ND	2.00	ND	2.00	ND	2.00	ND	2.00	19.0		ND	0.320	ND	0.320
-112A (BK69A)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	0.001		ND	0.001
-112B (BK69B)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.001	ND	0.001
-113A (D90A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	1.00		ND	0.160
-113B (D90B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.170		ND	0.160
-114A (BK90A) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-114B (BK90B) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-115A (D97A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.400		0.240		ND	0.160
-115B (D97B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-116A (BK97A) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	1 ug/L		ND	1 ug/L
-116B (BK97B) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-117A (D107A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-117B (D107B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-118A (BK107A) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-118B (BK107B) (1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L
-119A (D38A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.250		ND	0.160	ND	0.160
-119B (D38B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.120		ND	0.160	ND	0.160
-121A (D49A)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.730		ND	0.160
-121B (D49B)	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160

continued....

TABLE A-1

PCB CONCENTRATIONS - SOIL SAMPLES

Sample Number	PCB AROCHLORS													
	1016	Detection Limit	1221	Detection Limit	1232	Detection Limit	1242	Detection Limit	1248	Detection Limit	1254	Detection Limit	1260	Detection Limit
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-S-122A (BK48A)	ND	0.002	ND	0.002	ND	0.002	ND	0.002	ND	0.002	ND	0.003	ND	0.003
-122B (BK48B)	ND	0.002	ND	0.002	ND	0.001	ND	0.001	ND	0.001	ND	0.001	ND	0.001
-123A (BK49A)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.001	ND	0.001
-123B (BK49B)	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.0005	ND	0.001	ND	0.001
-124A	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	3.00	20.0		ND	1.900
-124B	ND	0.190	ND	0.190	ND	0.190	ND	0.190	1.70		1.60		ND	0.400
-125A	ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.240		0.360		ND	0.160
-125B	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.080	ND	0.160	ND	0.160
-127A	ND	0.830	ND	0.410	ND	0.830	ND	0.830	ND	1.70	4.90		ND	0.830
-127B	ND	1.70	ND	0.080	ND	1.70	ND	1.70	ND	1.70	2.0		ND	0.870
-128A	ND	44.0	ND	4.40	ND	44.0	ND	44.0	ND	44.0	430		ND	87.0
-128B	ND	0.380	ND	0.190	ND	0.380	ND	3.80	ND	2.90	3.00		ND	3.80
-129A	ND	37.0	ND	3.70	ND	37.0	ND	37.0	ND	37.0	250		ND	75.0
-129B	ND	1.50	ND	0.380	ND	1.50	ND	3.80	ND	3.80	16.0		ND	7.60

Notes:

(1) Indicates non-CLP data.

(2) Total PCB concentration 0.8 mg/kg.

(3) Sample holding time exceeded

NR Analysis not required due to non-detected PCB concentration in soil from top six inches.

ND None detected.

(D21A) - Indicates a field duplicate of sample S-021A.

(BK21A) - Indicates a field blank of sample S-021A.

(BBK) - Indicates a bottle blank.

For total PCB concentrations see Plan 2.

TABLE A-2

PCB CONCENTRATIONS - SEDIMENT SAMPLES

PCB AROCHLORS															
Sample Number		1016		1221		1232		1242		1248		1254		1260	
		mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)	mg/kg	Limit (mg/kg)
CRA-1916-SD-001A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-002A	(1)	ND	1	ND	1	ND	1	ND	1	2		ND	1	ND	1
-003A (D2a)	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-004A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-005A	(1)	ND	1	ND	1	ND	1	ND	1	1		ND	1	ND	1
-006A	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-007A (BK2A)	(1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	6 ug/L		ND	1 ug/L	ND	1 ug/L
-008A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.100		ND	0.160	ND	0.160
-009A		ND	0.080	ND	0.160	ND	0.080	0.270		ND	0.080	ND	0.160	ND	0.160
-009B		ND	0.080	ND	0.080	ND	0.080	0.240		ND	0.080	ND	0.160	ND	0.160
-010A		ND	6.50	ND	6.50	ND	6.50	16.0		ND	6.50	2.20		ND	1.30
-011A		ND	0.240	ND	0.240	ND	0.240	ND	0.240	1.10		0.590		ND	0.160
-012A		ND	0.830	ND	0.830	ND	0.830	ND	0.830	2.50		1.60		ND	0.330
-013A		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.440		0.280		ND	0.160
-014A (D13A)		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.280		ND	0.160	ND	0.160
-015A		ND	490	ND	970	ND	970	ND	970	1000		1000		ND	100
-016A		ND	250	ND	250	ND	250	470		ND	250	ND	32.0	ND	16.0
-017A		ND	0.090	ND	0.090	ND	0.090	ND	0.090	0.930		0.930		ND	0.180
-017B		ND	0.080	ND	0.080	ND	0.080	ND	0.080	0.180		0.270		ND	0.160
-018A		ND	55.0	ND	55.0	ND	55.0	ND	55.0	350		270		ND	82.0
-018B		ND	0.650	ND	0.650	ND	0.650	ND	0.650	6.70		5.10		ND	1.00
-019A		ND	34.0	ND	34.0	ND	34.0	ND	34.0	600		360		ND	70.0
-019B		ND	24.0	ND	24.0	ND	24.0	ND	24.0	52.0		23.0		ND	3.00
-020A		ND	42.0	ND	42.0	ND	42.0	ND	42.0	400		450		ND	83.0
-020B		ND	0.340	ND	0.340	ND	0.340	ND	0.340	1.40		1.90		ND	0.340
-021A		ND	1.60	ND	1.60	ND	1.60	ND	1.60	9.60		6.70		ND	0.800
-022A (BK13A)	(1)	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L	ND	1 ug/L

continued....

TABLE A-2

PCB CONCENTRATIONS - SEDIMENT SAMPLES

Sample Number	PCB AROCHLORS													
	1016	Detection Limit	1221	Detection Limit	1232	Detection Limit	1242	Detection Limit	1248	Detection Limit	1254	Detection Limit	1260	Detection Limit
	mg/kg	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CRA-1916-SD-500A	ND	0.700	ND	0.700	ND	0.700	ND	0.700	12.0		6.90		ND	0.870
-501A	ND	900	ND	900	ND	900	1400		ND	900	840		ND	180

Notes:

(1) - Indicates non-CLP analysis

ND - None detected

(D2A) - Indicates a field duplicate of sample SD-002A

(BK2A) - Indicates a field blank of sample SD-002A

For total PCB concentrations see Plan 2

TABLE A-3

PCB CONCENTRATIONS - SURFACE WATER SAMPLES

PCB AROCHLORS																					
Sample Number	Detection			Detection			Detection			Detection			Detection			Detection					
	1016	Limit		1221	Limit		1232	Limit		1242	Limit		1248	Limit		1254	Limit		1260	Limit	
	(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)	
CRA-1916-SW-001	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-002	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-003 (D2)	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-004	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-005	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-006	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-007 (BK2)	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-008	(1)	ND	1	ND	1		ND	1		ND	1		7			ND	1		ND	1	
-009	(1)	ND	2	ND	2		ND	2		ND	2		20			9			ND	2	
-010	(1)	ND	2	ND	2		ND	2		ND	2		18			8			ND	2	
-011	(1)	ND	15	ND	15		ND	15		ND	15		150			ND	15		ND	15	
-012	(1)	ND	15	ND	15		ND	15		ND	15		160			ND	15		ND	15	
-013	(1)	ND	3	ND	3		ND	3		ND	3		30			ND	3		ND	3	
-014 (D13)	(1)	ND	3	ND	3		ND	3		ND	3		25			ND	3		ND	3	
-015	(1)	ND	2	ND	2		ND	2		ND	2		20			ND	2		ND	2	
-016		ND	2	ND	2		ND	2		ND	2		ND	2		41			ND	2	
-018		ND	50	ND	50		ND	50		ND	50		ND	220		620			ND	220	
-019		ND	2	ND	2		ND	2		ND	2		6			ND	4		ND	4	
-021		ND	11	ND	11		ND	11		ND	11		47			ND	12		ND	12	
-022 (BK13)	(1)	ND	1	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
-501		ND	2	ND	2		ND	2		ND	2		8			ND	4		ND	4	

Notes:

(1) - Indicates non-CLP analysis

ND - None detected

(D2)- Indicates a field duplicate of sample SW-002

(BK)- Indicates a field blank of sample SW-002

For total PCB concentrations see Figure 6.1.

TABLE A-4

PCB CONCENTRATIONS - CONCRETE CORE SAMPLES

PCB AROCHLORS															
Sample Number	Detection		Detection		Detection		Detection		Detection		Detection		Detection		
	1016 (mg/kg)	Limit (mg/kg)	1221 (mg/kg)	Limit (mg/kg)	1232 (mg/kg)	Limit (mg/kg)	1242 (mg/kg)	Limit (mg/kg)	1248 (mg/kg)	Limit (mg/kg)	1254 (mg/kg)	Limit (mg/kg)	1260 (mg/kg)	Limit (mg/kg)	
CRA-1916-C-001	(1)	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
-002	(1)	ND	2	ND	2	ND	2	ND	2	ND	2	20		ND	2
-003	(1)	ND	1	ND	1	ND	1	ND	1	2		ND	1	ND	1
-004	(1)	ND	800	ND	800	ND	800	ND	800	8700		ND	800	ND	800
-005	(1)	ND	1	ND	1	ND	1	ND	1	10		ND	1	ND	1

Notes:

(1) - Indicates non-CLP data

ND - None detected

For total PCB concentrations see Plan 2

TABLE A-5

PCB CONCENTRATIONS - AIR SAMPLES

PCB AROCHLORS																														
Sample Number	1016			Detection		1221		Detection		1232		Detection		1242		Detection		1248		Detection		1254		Detection		1260		Detection		
	(ng/L)	Limit	(ng/L)	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	(ng/L)	Limit	
CRA-1916-1 (P)		NA				NA				NA				NA				NA				NA					NA			
-1 (V)		NA				NA				NA				NA				NA				NA					NA			
-2 (P)	(1)	ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			
-2 (V)	(1)	ND	0.17			ND	0.17			ND	0.17			2.3				ND	0.17			ND	0.17			ND	0.17			
-3 (D2)(P)	(1)	ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			
-3 (D2)(V)	(1)	ND	0.17			ND	0.17			ND	0.17			2.7				ND	0.17			ND	0.17			ND	0.17			
-4 (P)	(1)	ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			
-4 (V)	(1)	ND	0.17			ND	0.17			ND	0.17			0.72				ND	0.17			ND	0.17			ND	0.17			
-5 (P)	(1)	ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			
-5 (V)	(1)	ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			ND	0.17			
-6 (BK)(P)	(2)(1)	ND				ND				ND				ND				ND				ND				ND				
-7 (TBK)(V)	(3)(1)	ND				ND				ND				ND				ND				ND				ND				

Notes:

- (1) - Indicates non-CLP analysis
 - (2) - All PCBs less than 0.1 ng/filter
 - (3) - All PCBs less than 0.1 ng/tube
 - NA - Sample not analyzed due to pump failure
 - ND - None detected
 - (P) - Indicates particulate PCB analysis
 - (V) - Indicates vaporous PCB analysis
 - (BK) - Indicates a field blank
 - (TBK) - Indicates a trip blank
 - (D2) - Indicates a duplicate of sample CRA-1916-2
- For total PCB concentrations see Figure 6.2

TABLE A-6

PCB CONCENTRATIONS - WIPE SAMPLES

PCB AROCHLORS																												
Sample Number	1016		Detection Limit		1221		Detection Limit		1232		Detection Limit		1242		Detection Limit		1248		Detection Limit		1254		Detection Limit		1260		Detection Limit	
	(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)			(ug/100 cm ²)	(ug/swab)		
CRA-1916-WP-600	ND	3			ND	3			ND	3			ND	3			ND	3			5.3				ND	3		
-601	ND	10			ND	10			ND	10			ND	10			ND	10			2.4				ND	10		
-602 (1)	ND	1			ND	1			ND	1			ND	1			ND	1			1.3				ND	1		
-603 (BK)(1)	ND	1			ND	1			ND	1			ND	1			ND	1			ND	1			ND	1		
-604 (1)	ND	3			ND	3			ND	3			ND	3			ND	3			7.1				ND	3		
-605 (2)	ND	10			ND	10			ND	10			ND	10			ND	10			0.93				ND	10		
-606 (2)	ND	5			ND	5			ND	5			ND	5			ND	5			0.27				ND	5		

Notes:

- (1) Indicates non-CLP analysis
 (2) Wipe samples collected from uncleaned scrap metal at back of Superior Moving's truck parking lot. All other wipe samples collected from steam-cleaned scrap on site.
 ND - None detected
 (BK) Indicates a field blank

TABLE A-7

DIOXIN CONCENTRATIONS - SOIL SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - CHLORINATED DIBENZO-P-DIOXINS

Sample Number	Detection		Detection		Detection		Detection		Detection		Total Dioxin (ppb)
	Tetra (ppb)	Limit (ppb)	Penta (ppb)	Limit (ppb)	Hexa (ppb)	Limit (ppb)	Hepta (ppb)	Limit (ppb)	Octa (ppb)	Limit (ppb)	
CRA-1916-S-004A	ND	0.16	ND	0.10	ND	0.03	ND	0.09	0.84		0.84
-015A	ND	0.02	ND	0.04	ND	0.01	ND	0.09	1.43		1.43
-021A	ND	0.05	ND	0.07	0.41		ND	0.15	1.27		1.68
-038A	ND	0.14	0.71		ND	0.04	ND	0.19	ND	0.15	0.71
-048A	ND	0.04	ND	0.45	ND	0.51	ND	0.18	ND	0.09	ND
-049A	ND	0.03	ND	0.11	ND	0.06	ND	0.21	ND	0.11	ND
-057A	ND	0.15	ND	0.20	ND	0.15	ND	1.9	0.98		0.98
-058A (D21A)	ND	0.05	ND	0.05	ND	0.09	0.17		ND	0.24	0.17
-062A	ND	0.14	ND	0.08	ND	0.02	ND	0.04	ND	0.03	ND
-069A	ND	0.04	ND	0.06	ND	0.09	ND	0.04	ND	0.04	ND
-090A	ND	0.03	ND	0.06	ND	0.01	0.85		3.70		4.55
-097A	ND	0.19	ND	0.15	ND	0.13	ND	0.36	ND	0.69	ND
-107A	ND	0.11	ND	0.090	ND	0.03	ND	0.04	ND	0.03	ND
-120A (BK38A)	ND	0.3 ng/L	ND	0.6 ng/L	ND	0.3 ng/L	ND	0.4 ng/L	ND	0.6 ng/L	ND
-120B (BK38B)	ND	0.23 ng/L	ND	0.88 ng/L	ND	0.47 ng/L	ND	0.63 ng/L	ND	1.1 ng/L	ND

Notes:

ND - None detected

(D21A) - Indicates a field duplicate of sample S-021A

(BK38A) - Indicates a field blank of sample S-038A

TABLE A-8

DIOXIN CONCENTRATIONS - SEDIMENT SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - CHLORINATED DIBENZO-P-DIOXINS

Sample Number	Detection		Detection		Detection		Detection		Detection		Total Dioxin (ppb)
	Tetra (ppb)	Limit (ppb)	Penta (ppb)	Limit (ppb)	Hexa (ppb)	Limit (ppb)	Hepta (ppb)	Limit (ppb)	Octa (ppb)	Limit (ppb)	
CRA-1916-SD-002A	ND	0.04	ND	0.08	ND	0.12	ND	0.39	ND	0.57	ND
-003A (D2A)	ND	0.04	ND	0.09	ND	0.04	ND	0.50	0.11		0.11
-006A	ND	0.08	ND	0.10	ND	0.15	ND	0.71	ND	0.51	ND
-013A	ND	0.05	ND	0.06	ND	0.09	ND	0.33	ND	0.33	ND

Notes:

ND - None detected

(D2A) - Indicates a field duplicate of sample SD-002A

TABLE A-9

DIOXIN CONCENTRATIONS - SURFACE WATER SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - CHLORINATED DIBENZO-P-DIOXINS

Sample Number	Detection		Detection		Detection		Detection		Detection		Total Dioxin (ng/L)
	Tetra (ng/L)	Limit (ng/L)	Penta (ng/L)	Limit (ng/L)	Hexa (ng/L)	Limit (ng/L)	Hepta (ng/L)	Limit (ng/L)	Octa (ng/L)	Limit (ng/L)	
CRA-1916-SW-002	ND	0.3	ND	1.1	ND	0.4	ND	5.2	ND	6.0	ND
-006	ND	0.3	ND	2.1	ND	0.5	ND	4.6	ND	4.6	ND

Notes:

ND - None detected

TABLE A-10

FURAN CONCENTRATIONS - SOIL SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - POLYCHLORINATED DIBENZOFURANS

Sample Number	Detection		Detection		Detection		Detection		Detection		Total Furans (ppb)
	Tetra (ppb)	Limit (ppb)	Penta (ppb)	Limit (ppb)	Hexa (ppb)	Limit (ppb)	Hepta (ppb)	Limit (ppb)	Octa (ppb)	Limit (ppb)	
CRA-1916-S-004A	1.74		ND	0.07	ND	0.03	ND	0.13	ND	0.35	1.74
-015A	51.3		61.6		49.4		14.8		7.48		184.58
-021A	28.3		24.5		0.33		ND	1.7	ND	2.2	53.13
-038A	0.42		ND	0.05	0.04		ND	0.28	ND	0.23	0.46
-048A	8.00		78.0		133		51.4		35.7		306.1
-049A	0.05		ND	0.05	ND	0.04	ND	0.11	ND	0.11	0.05
-057A	ND	0.10	ND	0.08	ND	0.23	ND	2.6	ND	5.4	ND
-058A (D21A)	51.3		18.9		1.20		ND	0.99	ND	3.4	71.4
-062A	0.51		ND	0.02	ND	0.02	ND	0.25	ND	0.18	0.51
-069A	7.99		4.0		0.16		ND	0.07	ND	1.3	12.15
-090A	ND	0.01	ND	0.01	ND	0.01	ND	0.01	ND	0.01	ND
-097A	0.05		ND	0.07	ND	0.05	ND	0.48	ND	0.77	0.05
-107A	ND	0.03	ND	0.07	ND	0.01	ND	0.04	ND	0.04	ND
-120A (BK38A)	ND	0.2 ng/L	ND	0.2 ng/L	ND	0.1 ng/L	ND	1.7 ng/L	ND	1.6 ng/L	ND
-120B (BK38B)	ND	0.53 ng/L	ND	0.26 ng/L	ND	0.28 ng/L	ND	1.0 ng/L	ND	1.3 ng/L	ND

Notes:

ND - None detected

(D21A) - Indicates a field duplicate of sample S-021A

(BK38A) - Indicates a field blank of sample S-038A

TABLE A-11

FURAN CONCENTRATIONS - SEDIMENT SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - POLYCHLORINATED DIBENZOFURANS

Sample Number	Detection		Detection		Detection		Detection		Detection		Total Furans
	Tetra (ppb)	Limit (ppb)	Penta (ppb)	Limit (ppb)	Hexa (ppb)	Limit (ppb)	Hepta (ppb)	Limit (ppb)	Octa (ppb)	Limit (ppb)	
CRA-1916-SD-002A	ND	0.03	ND	0.04	ND	0.02	ND	0.35	ND	0.34	ND
-003A (D2A)	ND	0.03	ND	0.03	ND	0.02	ND	0.43	ND	0.41	ND
-006A	ND	0.07	0.19		ND	0.11	ND	0.22	ND	3.2	0.19
-013A	ND	0.02	ND	0.02	ND	0.03	ND	0.44	ND	0.34	ND

Notes:

ND - None detected

(D2A) - Indicates a field duplicate of sample SD-002A

TABLE A-12

FURAN CONCENTRATIONS - SURFACE WATER SAMPLES

HOMOLOGUE CUMULATIVE CONCENTRATIONS - POLYCHLORINATED DIBENZOFURANS

<u>Sample Number</u>	<u>Detection</u>		<u>Detection</u>		<u>Detection</u>		<u>Detection</u>		<u>Detection</u>		<u>Total Furans (ng/L)</u>
	<u>Tetra (ng/L)</u>	<u>Limit (ng/L)</u>	<u>Penta (ng/L)</u>	<u>Limit (ng/L)</u>	<u>Hexa (ng/L)</u>	<u>Limit (ng/L)</u>	<u>Hepta (ng/L)</u>	<u>Limit (ng/L)</u>	<u>Octa (ng/L)</u>	<u>Limit (ng/L)</u>	
CRA-1916-SW-002	ND	1.1	ND	0.2	ND	0.1	ND	4.0	ND	10.2	ND
-006	ND	0.3	ND	0.4	ND	0.3	ND	4.8	ND	6.6	ND

Notes:

ND - None detected

TABLE A-13

LEAD AND CADMIUM CONCENTRATIONS - SOIL SAMPLES

<u>Sample Number</u>	<u>Detection</u>		<u>Detection</u>	
	<u>Lead</u>	<u>Limit</u>	<u>Cadmium</u>	<u>Limit</u>
	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
CRA-1916-S-004A	2.79		ND	0.25
-015A	52		0.85	
-015B	7.2		ND	0.2
-021A	9.2		ND	0.2
-021B	9.3		ND	0.2
-023A	140		0.31	
-023B	13		ND	0.2
-048A	16		ND	0.2
-048B	12		ND	0.2
-049A	9.6		ND	0.2
-049B	12		ND	0.2
-058A (D21A)	14		ND	0.2
-058B (D21B)	11		ND	0.2
-062A	18		ND	0.2
-062B	8.8		ND	0.2
-069A	16		0.4	
-069B	15		ND	0.2
-069C	10		ND	0.2
-081A	7.6		ND	0.2
-081B	11		ND	0.2
-090A	12		ND	0.2
-090B	10		ND	0.2
-097A	8.0		ND	0.2
-097B	6.2		ND	0.2
-107A	14		ND	0.2
-107B	10		ND	0.2
-108A (D81A)	12		0.35	
-108B (D81B)	11		ND	0.2
-109A (D61A)	13		ND	0.2
-109B (D61B)	6.2		ND	0.2
-110A (BK62A)	ND	0.05 mg/L	ND	0.01 mg/L
-110B (BK62B)	ND	0.05 mg/L	ND	0.01 mg/L
-111A (D69A)	10		0.4	
-111B (D69B)	17		ND	0.2
-111C (D69C)	11		ND	0.2
-112A (BK69A)	ND	0.05 mg/L	ND	0.01 mg/L
-112B (BK69B)	ND	0.05 mg/L	ND	0.01 mg/L
-115A (D97A)	6.6		ND	0.2
-115B (D97B)	5.8		ND	0.2
-117A (D107A)	13		ND	0.2
-117B (D107B)	11		ND	0.2

NOTES:

ND - None detected

(D81A) - Indicates a field duplicate of sample S-081A

(BK62A) - Indicates a field blank of sample S-062A

All lead and cadmium non-CLP analysis

TABLE A-14

LEAD AND CADMIUM CONCENTRATIONS - SEDIMENT SAMPLES

<u>Sample Number</u>	<u>Detection</u>		<u>Detection</u>	
	<u>Lead</u>	<u>Limit</u>	<u>Cadmium</u>	<u>Limit</u>
	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
CRA-1916-SD-002A	2.1		ND	0.2
-003A (D2A)	ND	1	ND	0.2
-006A	ND	1	ND	0.2
-007A (BK2A)	ND	0.05 mg/L	ND	0.01 mg/L
-013A	3.8		ND	0.2

NOTES:

ND - None Detected

(D2A) - Indicates a field duplicate of sample SD-002A

(BK2A) - Indicates a field blank of sample SD-002A

All lead and cadmium non-CLP analysis

TABLE A-15

pH, CONDUCTIVITY, DISSOLVED OXYGEN - SURFACE WATER SAMPLES

<u>Sample Number</u>	<u>pH (s.u.)</u>	<u>Conductivity (umhos)</u>	<u>Dissolved Oxygen (mg/L)</u>	<u>Temperature (°C)</u>
CRA-1916-SW-001	7.9	28	14.47	2.5
-002	8.1	149	15.46	3.5
-003 (D2)	7.0	--	--	--
-004	8.2	217	15.45	2.5
-005	8.0	213	15.47	2
-006	8.0	110	14.35	5
-007 (BK2)	8.2	--	--	--
-008	7.7	59	15.2	0.5
-009	8.0	--	15.0	0
-010	7.8	39	17.0	0
-011	8.0	30	13	0
-012	8.0	--	12.4	--
-013	8.0	--	12.4	--
-014 (D13)	8.0	--	--	--
-015	8.0	--	12	--
-016	7.0	--	--	--
-018	7.0	--	--	--
-019	7.0	--	--	--
-021	7.0	--	--	--
-022 (BK13)	8.6	--	--	--
-501	7.0	--	--	--

NOTES:

(D13) - Indicates a field duplicate of sample SW-013

(BK2) - Indicates a field blank of sample SW-002

TABLE A-16

VOLATILE ORGANIC COMPOUNDS - SOIL SAMPLES

Compound	S-021A		S-021B		S-023A		S-023B		S-032A		S-032B		S-048A	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
chloromethane	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
bromomethane	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
vinyl chloride	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
chloroethane	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
methylene chloride	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
acetone	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
carbon disulfide	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
1,1-dichloroethene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
1,1-dichloroethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
trans-1,2-dichloroethene	8		ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
chloroform	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
1,2-dichloroethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
2-butanone	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
1,1,1-trichloroethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
carbon tetrachloride	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	1000
vinyl acetate	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	500
bromodichloromethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
1,2-dichloropropane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
cis-1,3-dichloropropene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
trichloroethene	26		14		ND	5	ND	5	ND	5	ND	5	ND	500
dibromochloromethane	6		ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
1,1,2-trichloroethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500

continued....

TABLE A-16

VOLATILE ORGANIC COMPOUNDS - SOIL SAMPLES

Compound	S-021A		S-021B		S-023A		S-023B		S-032A		S-032B		S-048A	
	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)	Compound Conc. (ug/kg)	Detection Limit (ug/kg)
benzene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
trans-1,3-dichloropropene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
2-chloroethyl vinyl ether	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
bromoform	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
2-hexanone	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	500
4-methyl-2-pentanone	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	1000
tetrachloroethene	27		45		ND	5	ND	5	ND	5	ND	5	ND	500
1,1,2,2-tetrachloroethane	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
toluene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
chlorobenzene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
ethyl benzene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
styrene	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500
total xylenes	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	500

continued....

TABLE A-16

VOLATILE ORGANIC COMPOUNDS - SOIL SAMPLES

Compound	S-048B		S-049A		S-049B		S-058A (D21A)		S-058B (D21B)		S-059A (BK21A)	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
chloromethane	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
bromomethane	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
vinyl chloride	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
chloroethane	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
methylene chloride	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
acetone	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
carbon disulfide	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
1,1-dichloroethene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
1,1-dichloroethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
trans-1,2-dichloroethene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
chloroform	ND	500	ND	500	ND	500	ND	5	ND	5	8	
1,2-dichloroethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
2-butanone	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
1,1,1-trichloroethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
carbon tetrachloride	ND	1000	ND	1000	ND	500	ND	5	ND	5	ND	5
vinyl acetate	ND	500	ND	500	ND	1000	ND	10	ND	10	ND	10
bromodichloromethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
1,2-dichloropropane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
cis-1,3-dichloropropene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
trichloroethene	ND	500	ND	500	ND	500	13		16		ND	5
dibromochloromethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
1,1,2-trichloroethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5

continued....

TABLE A-16

VOLATILE ORGANIC COMPOUNDS - SOIL SAMPLES

Compound	S-048B		S-049A		S-049B		S-058A (D21A)		S-058B (D21B)		S-059A (BK21A)	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
benzene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
trans-1,3-dichloropropene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
2-chloroethyl vinyl ether	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
bromoform	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
2-hexanone	ND	500	ND	1000	ND	1000	ND	10	ND	10	ND	10
4-methyl-2-pentanone	ND	1000	ND	1000	ND	1000	ND	10	ND	10	ND	10
tetrachloroethene	ND	500	ND	500	ND	500	17		39		ND	5
1,1,2,2-tetrachloroethane	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
toluene	ND	500	ND	500	ND	500	ND	5	6		ND	5
chlorobenzene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
ethylbenzene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
styrene	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5
total xylenes	ND	500	ND	500	ND	500	ND	5	ND	5	ND	5

NOTES:

(D21A) - Indicates a field duplicate of sample S-021A.

(BK21A) - Indicates a field blank of sample S-021A.

ND - None detected.

All Volatile Organic Analyses performed in accordance with CLP protocols.

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-021A		S-021B		S-023A		S-023B		S-032A		S-032B		S-048A	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
phenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
bis(2-chloroethyl) ether	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2-chlorophenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
1,3-dichlorobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
1,4-dichlorobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzyl alcohol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
1,2-dichlorobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2-methylphenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
bis(2-chloroisopropyl) ether	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-methylphenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
n-nitroso-di-n-propylamine	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
hexachloroethane	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
nitrobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
isophorone	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2-nitrophenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4-dimethylphenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzoic acid	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
bis(2-chloroethoxy)methane	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4-dichlorophenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
1,2,4-trichlorobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
naphthalene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-chloroaniline	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
hexachlorobutadiene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-chloro-3-methylphenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2-methylnaphthalene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
hexachlorocyclopentadiene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4,6-trichlorophenol	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4,5-trichlorophenol	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000

continued....

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-021A		S-021B		S-023A		S-023B		S-032A		S-032B		S-048A	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
2-chloronaphthalene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2-nitroaniline	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
dimethyl phthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
acenaphthylene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
3-nitroaniline	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
acenaphthene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4-dinitrophenol	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
4-nitrophenol	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
dibenzofuran	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,6-dinitrotoluene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
2,4-dinitrotoluene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
diethylphthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-chlorophenyl-phenylether	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
fluorene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-nitroaniline	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
4,6-dinitro-2-methylphenol	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
n-nitrosodiphenylamine	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
4-bromophenyl-phenylether	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
hexachlorobenzene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
pentachlorophenol	ND	400,000	ND	400,000	ND	28,000	ND	6,000	ND	3,000	ND	40,000	ND	440,000
phenanthrene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
anthracene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
di-n-butylphthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
fluoranthene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
pyrene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
butylbenzylphthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
3,3'-dichlorobenzidine	ND	160,000	ND	160,000	ND	11,000	ND	2,400	ND	1,200	ND	16,000	ND	180,000

continued....

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-048B		S-049A		S-049B		S-058A (D21A)		S-058B (D21B)		S-059A (BK21A)	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
phenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
bis(2-chloroethyl) ether	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2-chlorophenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
1,3-dichlorobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
1,4-dichlorobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzyl alcohol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
1,2-dichlorobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2-methylphenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
bis(2-chloroisopropyl) ether	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-methylphenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
n-nitroso-di-n-propylamine	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
hexachloroethane	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
nitrobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
isophorone	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2-nitrophenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4-dimethylphenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzoic acid	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
bis(2-chloroethoxy)methane	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4-dichlorophenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
1,2,4-trichlorobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
naphthalene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-chloroaniline	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
hexachlorobutadiene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-chloro-3-methylphenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2-methylnaphthalene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
hexachlorocyclopentadiene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4,6-trichlorophenol	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4,5-trichlorophenol	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50

continued....

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-048B		S-049A		S-049B		S-058A (D21A)		S-058B (D21B)		S-059A (BK21A)	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
2-chloronaphthalene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2-nitroaniline	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
dimethyl phthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
acenaphthylene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
3-nitroaniline	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
acenaphthene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4-dinitrophenol	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
4-nitrophenol	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
dibenzofuran	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,6-dinitrotoluene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
2,4-dinitrotoluene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
diethyl phthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-chlorophenyl-phenylether	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
fluorene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-nitroaniline	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
4,6-dinitro-2-methylphenol	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
n-nitrosodiphenylamine	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
4-bromophenyl-phenylether	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
hexachlorobenzene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
pentachlorophenol	ND	110,000	ND	1,800	ND	1,800	ND	400,000	ND	360,000	ND	50
phenanthrene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
anthracene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
di-n-butylphthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
fluoranthene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
pyrene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
butylbenzylphthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
3,3'-dichlorobenzidine	ND	44,000	ND	740	ND	720	ND	160,000	ND	150,000	ND	20

continued....

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-021A		S-021B		S-023A		S-023B		S-032A		S-032B		S-048A	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
benzo(a)anthracene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
bis(2-ethylhexyl)phthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
chrysene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
di-n-octyl phthalate	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzo(b)fluoranthene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzo(k)fluoranthene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzo(a)pyrene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
indeno(1,2,3-cd)pyrene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
dibenz(a,h)anthracene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000
benzo(ghi)perylene	ND	80,000	ND	79,000	ND	5,600	ND	1,200	ND	590	ND	8,100	ND	89,000

TABLE A-17

BASE/NEUTRAL AND ACID EXTRACTABLES - SOIL SAMPLES

Compound	S-048B		S-049A		S-049B		S-058A (D21A)		S-058B (D21B)		S-059A (BK21A)	
	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection	Compound	Detection
	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)	Conc. (ug/kg)	Limit (ug/kg)
benzo(a)anthracene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
bis(2-ethylhexyl)phthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
chrysene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
di-n-octyl phthalate	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzo(b)fluoranthene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzo(k)fluoranthene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzo(a)pyrene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
Indeno(1,2,3-cd)pyrene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
dibenz(a,h)anthracene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10
benzo(ghi)perylene	ND	22,000	ND	370	ND	360	ND	80,000	ND	73,000	ND	10

NOTES:

(D21A) - Indicates a field duplicate of sample S-021A

(BK21A) - Indicates a field blank of sample S-021A

ND - None detected

APPENDIX B

CHAIN OF CUSTODY RECORD FORMS

APR - 3 1987

CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES LIMITED 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2 Telephone (519) 884-0510					SHIPPED TO (Laboratory name): ENVIROTEST					
CHAIN OF CUSTODY RECORD				PROJECT NO. 1916		PROJECT NAME: CRAWFORDSVILLE, IN				
SAMPLER'S SIGNATURE <u>Catherine A Cull</u> (SIGN)					SAMPLE TYPE		NR. OF CONTAINERS		REMARKS	
SEQ. NO.	SAMPLE NO.	DATE	TOTAL TIME VOLUME	SAMPLE LOCATION						
	CRA-1916-2	11/30/86	120.78 l	concrete pad	particulate PCB	1				
	CRA-1916-3		119.69 l	concrete pad	vapor PCB	2				
					particulate PCB	1				duplicate
					vapor PCB	1				
	CRA-1916-4		120.93 l	disposal area	particulate PCB	1				
					vapor PCB	2				*
	CRA-1916-5		121.14 l	disposal area	particulate	1				
					vapor PCB	2				*
	CRA-1916-6		—	field blank	particulate	1				
	CRA-1916-7		—	trip blank	flashed tube	1				
Please analyze and report corral results to Paul Plotz - 519-884-0510										
* Analyze front (front) tube first. If it is determined that the tube has experienced breakthrough, analyze second (back) tube as well.										
					TOTAL NO. OF CONTAINERS — 13					
RELINQUISHED BY: <u>Catherine A Cull</u> ① (SIGN)				DATE/TIME 12/1/86, 1700		RECEIVED BY: ② (SIGN)				
RELINQUISHED BY: ② (SIGN)				DATE/TIME _____		RECEIVED BY: ③ (SIGN)				
RELINQUISHED BY: ③ (SIGN)				DATE/TIME _____		RECEIVED BY: ④ (SIGN)				
RELINQUISHED BY: ④ (SIGN)				DATE/TIME _____		RECEIVED BY: ⑤ (SIGN)				
METHOD OF SHIPMENT: Fed Ex			SHIPPED BY: CAC			RECEIVED FOR LABORATORY BY: (SIGN) <u>Paul Plotz</u>			DATE/TIME 12/1/86 9:30	
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:						COOLER OPENED BY: (SIGN) _____			DATE/TIME _____	

CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES LIMITED 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2 Telephone (519) 884-0510					SHIPPED TO (Laboratory name): <i>HLAW</i>			
CHAIN OF CUSTODY RECORD				PROJECT NO. <i>1916</i>		PROJECT NAME : <i>Crawfordsville</i>		
SAMPLER'S SIGNATURE <i>Catherine A. Cull</i> <div style="text-align: center; font-size: small;">(SIGN)</div>					SAMPLE TYPE		REMARKS	
SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS			
CRA-1916-S-015A		12/4/86	1420		1			
CRA-1916-S-015B		1	1425		1			
CRA-1916-S-004A		12	1330		1			
<i>please analyze for DIOXIN, FURANS</i>								
<i>*** Please analyze for (1) DIOXIN, FURANS</i>								
<i>(2) PCB</i>								
<i>(3) Ph, Cd</i>								
TOTAL NO. OF CONTAINERS						<i>3</i>		

RELINQUISHED BY: <i>Catherine A. Cull</i> <div style="text-align: center; font-size: small;">(SIGN)</div>	DATE/TIME <i>12/4/86 17:00</i>	RECEIVED BY: <i>2</i> <div style="text-align: center; font-size: small;">(SIGN)</div>
RELINQUISHED BY: <i>2</i> <div style="text-align: center; font-size: small;">(SIGN)</div>	DATE/TIME <i>1</i>	RECEIVED BY: <i>3</i> <div style="text-align: center; font-size: small;">(SIGN)</div>
RELINQUISHED BY: <i>5</i> <div style="text-align: center; font-size: small;">(SIGN)</div>	DATE/TIME <i>1</i>	RECEIVED BY: <i>4</i> <div style="text-align: center; font-size: small;">(SIGN)</div>
RELINQUISHED BY: <i>4</i> <div style="text-align: center; font-size: small;">(SIGN)</div>	DATE/TIME <i>1</i>	RECEIVED BY: <i>5</i> <div style="text-align: center; font-size: small;">(SIGN)</div>

METHOD OF SHIPMENT: <i>Fed Ex</i>	SHIPPED BY: <i>CAC</i>	RECEIVED FOR LABORATORY BY: <div style="text-align: center; font-size: small;">(SIGN)</div> <i>Lynn M. Kotler</i>	DATE/TIME <i>12-5-86 10:30</i>
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: <div style="text-align: center; font-size: small;">(SIGN)</div> <i>Lynn M. Kotler</i>	DATE/TIME <i>12-5-86 10:30</i>

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SHIPPED TO (Laboratory name):

LOADSLEUTH - ALBERT

CHAIN OF CUSTODY RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Catherine A. Cull
(SIGN)

SAMPLE
TYPE

NO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
	CRA-1916-C-001	12/7/86	0930		concrete	1	anvil line for
	CRA-1916-S-001A	"	1400		soil	1	PCB/4
	CRA-1916-C-002	"	1600		concrete	1	
	CRA-1916-S-002A	"	1630		soil	1	
	CRA-1916-C-003	12/4/86	0945		concrete	1	
	CRA-1916-S-003A	"	1300		soil	1	
	CRA-1916-C-004	"	1050		concrete	1	
	CRA-1916-S-004A	"	1330	level 10	soil	1	
	CRA-1916-C-005	"	1200	stage	concrete	1	
	CRA-1916-S-005A	"	1400		soil	1	
	CRA-1916-S-006A	12/2/86	1400		soil	1	
	CRA-1916-S-007A	"	1430		soil	1	
	CRA-1916-S-008A	"	1500		soil	1	
	CRA-1916-S-009A	"	1515		soil	1	
	CRA-1916-S-010A	12/3/86	1645		soil	1	
	CRA-1916-S-010B	"	1650		soil	1	
	CRA-1916-S-013A	12/4/86	1430		soil	1	
	CRA-1916-S-013B	"	1435		soil	1	
	CRA-1916-S-014A	"	1440		soil	1	
	CRA-1916-S-014B	"	1445		soil	1	
TOTAL NO. OF CONTAINERS						10	

RELINQUISHED BY: ① <i>Catherine A. Cull</i> (SIGN)	DATE/TIME 12/4/86 1700	RECEIVED BY: ② <i>[Signature]</i> (SIGN)
RELINQUISHED BY: ② _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ③ _____ (SIGN)
RELINQUISHED BY: ③ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ④ _____ (SIGN)
RELINQUISHED BY: ④ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ⑤ _____ (SIGN)
METHOD OF SHIPMENT: <i>Fed. Ex.</i>	SHIPPED BY: <i>CAC</i>	RECEIVED FOR LABORATORY BY: (SIGN) <i>Brad Carter</i>
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN) _____
		DATE/TIME 12/5/86 1000

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Nº 002989

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Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WABSWORTH / ELECT

CANTON, OHIO

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME: FORMER P.D. MINE

PLANT SITE, CRAWFORDSVILLE,
INDIANA

SAMPLER'S SIGNATURE

(SIGN)

SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

ANALYSIS

SEQ. No.	SAMPLE No.	DATE	TIME	SAMPLE LOCATION	TYPE	NO. CONT.	REMARKS ANALYSIS
CRA-1916-S-011A	5 Dec/86	16:00		SOIL	1	PbB	
CRA-1916-S-012A	"	16:00		"	1	"	
CRA-1916-S-012B	"	16:10		"	1	"	
CRA-1916-S-017A	"	16:18		"	1	"	
CRA-1916-S-017B	"	16:30		"	1	"	
CRA-1916-S-018A	"	16:30		"	1	"	
CRA-1916-S-018B	"	16:30		"	1	"	
CRA-1916-S-19A	"	16:50		"	1	"	
CRA-1916-S-19B	"	16:50		"	1	"	
CRA-1916-S-21A	"	16:30		"	2	PbB / Pb, Cd / BNA	
CRA-1916-S-21A	"	16:30		"	1	VOC	
CRA-1916-S-21B	"	16:40		"	2	PbB / Pb, Cd / BNA	
CRA-1916-S-21B	"	16:40		"	1	VOC	
CRA-1916-S-057A	"	11:06		"	1	PbB	
CRA-1916-S-057B	"	11:06		"	1	PbB	
CRA-1916-S-058A	"	16:30		"	2	PbB / Pb, Cd / BNA	
CRA-1916-S-058A	"	16:30		"	1	VOC	
CRA-1916-S-058B	"	16:40		"	2	PbB / Pb, Cd / BNA	
CRA-1916-S-058B	"	16:40		"	1	VOC	
				TOTAL NO. OF CONTAINERS	23		

RELINQUISHED BY:

①

(SIGN)

DATE / TIME

05 Dec/86 16:10

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE / TIME

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE / TIME

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE / TIME

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED EX

SHIPPED BY:

ROBERT PYLE

RECEIVED FOR LABORATORY BY:

(SIGN) D. Pohl

DATE / TIME

12/6/86 10:30 AM

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) D. Pohl

DATE / TIME

12/6/86 10:30 AM

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SHIPPED TO (Laboratory name):

Woodward Clyde - Portland

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1911

PROJECT NAME:

Crawfordville

SAMPLER'S SIGNATURE

William A. Galt

(SIGN)

SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
CRA-1	PH-SD-001A	12/6/86		250 ml water	water	1	PCB, Pb, Cd
CRA-2	PH-SD-002A	12/6/86		1	1	1	PCB, Pb, Cd
CRA-3	PH-SD-003A	12/6/86		1	1	1	PCB, Pb, Cd
CRA-4	PH-SD-004A	12/6/86		1	1	1	PCB, Pb, Cd
CRA-5	PH-SD-005A	12/6/86		1	1	1	PCB, Pb, Cd
CRA-6	PH-SD-006A	12/6/86		1	1	1	PCB, Pb, Cd
CRA-7	PH-SD-007A	12/7/86		5	5	1	PCB, Pb, Cd
CRA-8	PH-SD-008A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-9	PH-SD-009A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-10	PH-SD-010A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-11	PH-SD-011A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-12	PH-SD-012A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-13	PH-SD-013A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-14	PH-SD-014A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-15	PH-SD-015A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-16	PH-SD-016A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-17	PH-SD-017A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-18	PH-SD-018A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-19	PH-SD-019A	12/7/86		1	1	1	PCB, Pb, Cd
CRA-20	PH-SD-020A	12/7/86		1	1	1	PCB, Pb, Cd
TOTAL NO. OF CONTAINERS						11	

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1

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12/9/86 1:00 PM

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3

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RELINQUISHED BY:

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(SIGN)

DATE/TIME

12/9/86 1:00 PM

RECEIVED BY:

4

(SIGN)

RELINQUISHED BY:

4

(SIGN)

DATE/TIME

12/9/86 1:00 PM

RECEIVED BY:

5

(SIGN)

METHOD OF SHIPMENT:

Truck

SHIPPED BY:

12/9/86

RECEIVED FOR LABORATORY BY:

(SIGN)

Brad Hunter

DATE/TIME

12-9-86 1:00 PM

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SHIPPED TO (Laboratory name):

*Woodworth - Adept***CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME :

Crawfordsville

SAMPLER'S SIGNATURE

Catherine A. Gull

(SIGN)

SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NR. OF CONTAINERS	REMARKS
CRA-	1916-5-20A	12/7/86	1440	250 ml	Soil	1	PRB
CRA-	1916-5-20B		1505	+		1	PRB
CRA-	1916-5-23A		1410	40 ml vial		1	VOL
CRA-	1916-5-23A		1420	250 ml		1	BNA
CRA-	1916-5-23A		1410	+		1	PRB, PL. Col.
CRA-	1916-5-23B		1425	40 ml vial		1	VOL
CRA-	1916-5-23B		1425	250 ml		1	BNA
CRA-	1916-5-23B		1425			1	PRB, PL. Col.
CRA-	1916-5-24A	12/8/86	1115			1	PRB
CRA-	1916-5-24B		1125			1	
CRA-	1916-5-25A		1140			1	
CRA-	1916-5-25B		1155			1	
CRA-	1916-5-27A		1210			1	
CRA-	1916-5-27B		1220			1	
CRA-	1916-5-28A		1235			1	
CRA-	1916-5-28B		1250			1	
CRA-	1916-5-76A		1310			1	
CRA-	1916-5-76B		1320			1	
TOTAL NO. OF CONTAINERS						18	

RELINQUISHED BY:

①

(SIGN)

DATE/TIME

12/8/86 1100

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

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(SIGN)

DATE/TIME

RECEIVED BY:

③

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DATE/TIME

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RELINQUISHED BY:

④

(SIGN)

DATE/TIME

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

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CAC

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(SIGN) [Signature]

DATE/TIME

12/8/86 10:00

CONDITION OF SEAL UPON RECEIPT:

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DATE/TIME

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* Sample CRA-1916-5-76A
 -76B N° 002984
 Not Received.

04/02/1987

14:06

HLAW PANAFAX

UF-400 *****

608 2417227

P.01

CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES LIMITED 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2 Telephone (519) 884-0510					SHIPPED TO (Laboratory name): <div style="text-align: center; font-size: 1.2em;">Hagilton</div> <div style="text-align: right; font-size: 1.2em;">DEC 9 1986</div>		
CHAIN OF CUSTODY RECORD			PROJECT NO. <div style="text-align: center; font-size: 1.2em;">1916</div>	PROJECT NAME: <div style="text-align: center; font-size: 1.2em;">Cambridgeville</div>			
SAMPLER'S SIGNATURE <u>Catherine A. Cull</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>				SAMPLE TYPE <div style="text-align: center; font-size: 0.8em;">SED</div>	NO. OF CONTAINERS <div style="text-align: center; font-size: 0.8em;">1</div>	REMARKS <div style="text-align: center; font-size: 0.8em;">DIOXIN</div>	
SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
CRA-1916-S-021A		12/5/86	1230	250 ml amber	SED	1	DIOXIN
CRA-1916-S-051A		1106				1	
CRA-1916-S-056A		1630				1	
CRA-1916-S-051B		1640				1	
CRA-1916-S-057B		1106				1	
CRA-1916-S-057B		1640				1	
CRA-1916-S-002A		12/6/86	1430	250 ml amber	SED	1	DIOXIN
CRA-1916-S-003A		12/6/86	1430			1	
CRA-1916-S-004A		12/7/86	1130			1	
CRA-1916-SW-002		12/6/86	1400	1 liter amber	water	1	DIOXIN
CRA-1916-SW-006		12/7/86	1130			1	
				TOTAL NO. OF CONTAINERS <u>10</u>			
RELINQUISHED BY: <u>Catherine A. Cull</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">12/8/86 1800</div>		RECEIVED BY: <u>2</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>			
RELINQUISHED BY: <u>2</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">1</div>		RECEIVED BY: <u>3</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>			
RELINQUISHED BY: <u>3</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">1</div>		RECEIVED BY: <u>4</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>			
RELINQUISHED BY: <u>4</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">1</div>		RECEIVED BY: <u>5</u> <div style="text-align: center; font-size: 0.8em;">(SIGN)</div>			
METHOD OF SHIPMENT: <div style="text-align: center; font-size: 1.2em;">Fed Ex</div>		SHIPPED BY: <div style="text-align: center; font-size: 1.2em;">CAC</div>		RECEIVED FOR LABORATORY BY: <div style="text-align: center; font-size: 0.8em;">(SIGN) Lynn M. Kotler</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">12-9-86, 10:00a</div>	
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:				COOLER OPENED BY: <div style="text-align: center; font-size: 0.8em;">(SIGN) Lynn M. Kotler</div>		DATE / TIME <div style="text-align: center; font-size: 0.8em;">12-9-86 10:00a</div>	

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SHIPPED TO (Laboratory name):

WADSWORTH ALERT

CHAIN OF CUSTODY
RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Lloyd Lemon
(SIGN)SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NR. OF CONTAINERS	REMARKS
	CRA-1916-SW008	12-10-86	14:10	CAC/MGM	WATER	1	1L-PCB
	CRA-1916-SW009	12-10-86	14:50	CAC/MGM		1	
	CRA-1916-SW010	12-10-86	14:30	CAC/MGM		1	
	CRA-1916-SW011	12-10-86	15:10	CAC/MGM		1	
	CRA-1916-SW012		15:40	MGM/LL		1	
	CRA-1916-SW013		1600			1	
	CRA-1916-SW014		1600			1	
	CRA-1916-SW015		1600			1	
	CRA-1916-SW022		1615			1	
	CRA-1916-SW008	12-10-86	AS ABOVE		WATER	1	40ML for pH ONLY
	CRA-1916-SW009					1	
	CRA-1916-SW010					1	
	CRA-1916-SW011					1	
	CRA-1916-SW012					1	
	CRA-1916-SW013					1	
	CRA-1916-SW014					1	
	CRA-1916-SW015					1	
	CRA-1916-SW022					1	
TOTAL NO. OF CONTAINERS						18	

RELINQUISHED BY:

①

Lloyd Lemon
(SIGN)

DATE/TIME

Dec 1986, 17:30

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

1

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

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(SIGN)

DATE/TIME

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(SIGN)

RELINQUISHED BY:

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DATE/TIME

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RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

COURIER

SHIPPED BY:

FEDERAL EXPRESS

RECEIVED FOR LABORATORY BY:

(SIGN) *Brad Carter*

DATE/TIME

12/11/86, 9:20

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN)

DATE/TIME

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 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2
 Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WADSWORTH - ALERT

CHAIN OF CUSTODY RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)

SAMPLE
TYPE

NO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	TYPE	NO. CONT.	REMARKS
CRA-	1916-5-078A	12/9/86	17:00	250 ml AMBER	SOIL	1	PCB
CRA-	1916-5-078B	12/9/86					
CRA-	1916-5-079A	12/9/86	17:15			1	
CRA-	1916-5-079B		17:25			1	
CRA-	1916-5-080A		17:30			1	
CRA-	1916-5-080B		17:45			1	
CRA-	1916-5-084A		18:30			1	
CRA-	1916-5-084B		16:45			1	
CRA-	1916-5-087A		16:00			1	
CRA-	1916-5-087B		16:10			1	
CRA-	1916-5-088A		15:30			1	
CRA-	1916-5-088B		15:40			1	
CRA-	1916-5-088A		16:00			1	⊙
CRA-	1916-5-088B	▽	16:10			1	
CRA-	1916-5-089A	12/9/86	11:40			1	
CRA-	1916-5-089B	12/10/86	16:00			1	▽
CRA-	1916-5-081A		16:30	PET		1	PCB, Cd, Pb
CRA-	1916-5-081B		16:40			1	PCB, Cd, Pb
CRA-	1916-5-082A		17:00			1	PCB
CRA-	1916-5-082B		17:10		▽	1	PCB
CRA-	1916-5-085A		16:30			1	PCB, Cd, Pb
				TOTAL NO. OF CONTAINERS	1		

RELINQUISHED BY: ① <i>Jay Churchill</i> (SIGN)	DATE/TIME 12/10/86 18:00	RECEIVED BY: ② <i>ZE</i> (SIGN)
RELINQUISHED BY: ② _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ③ _____ (SIGN)
RELINQUISHED BY: ③ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ④ _____ (SIGN)
RELINQUISHED BY: ④ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ⑤ _____ (SIGN)

METHOD OF SHIPMENT: FED. EX.	SHIPPED BY: J.L.	RECEIVED FOR LABORATORY BY: (SIGN) <i>Bred Carter</i>	DATE/TIME 12-11-86 9:30
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:	COOLER OPENED BY: (SIGN) _____	DATE/TIME _____	

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Nº 002988

CRA

Consulting Engineers

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651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WADSWORTH - ALERT

CHAIN OF CUSTODY
RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ.
NO.SAMPLE
NO.

DATE

TIME

SAMPLE LOCATION

✓	CRA-1916-5-030A	12/9/86	11:45	250 ml AMBER	SOIL	1	PCB
✓	CRA-1916-5-030B	12/9/86	11:55	↓		1	↓
✓	CRA-1916-5-031A		12:00	↓		1	↓
✓	CRA-1916-5-031B		12:15	↓		1	↓
✓	CRA-1916-5-032A		12:10	40 ml VIAL		1	VOG
✓	CRA-1916-5-032A		12:10	250 ml AMBER		1	BNA
✓	CRA-1916-5-032A		12:10	250 ml AMBER		1	PCB
✓	CRA-1916-5-032B		12:25	40 ml VIAL		1	VOG
✓	CRA-1916-5-032B		12:25	250 ml AMBER		1	BNA
✓	CRA-1916-5-032B		12:25	250 ml AMBER		1	PCB
✓	CRA-1916-5-033A		12:28	250 ml AMBER		1	
✓	CRA-1916-5-033B		12:35			1	
✓	CRA-1916-5-034A		13:40			1	
✓	CRA-1916-5-034B		13:50			1	
✓	CRA-1916-5-035A		13:08			1	
✓	CRA-1916-5-035B		13:20			1	
✓	CRA-1916-5-036A		12:40			1	
✓	CRA-1916-5-036B		12:55			1	
✓	CRA-1916-5-077A		17:00			1	
✓	CRA-1916-5-077B		17:15			1	
TOTAL NO. OF CONTAINERS						20	

RELINQUISHED BY:

①

Jay Churchill
(SIGN)

DATE/TIME

12/10/86 18:00

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

(SIGN) *Brad Carter*

DATE/TIME

12/10/86 9:30

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) _____

DATE/TIME

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Nº 002987

WADSWORTH - ALERT

Crawfordsville

(SIGN)

NO. OF
CONTAINERS

REMARKS

200

PCR

TOTAL NO. OF CONTAINERS

(SIGN)

12/13/86, 1500

②

(SIGN)

2

(SIGN)

③

(SIGN)

3

(SIGN)

④

(SIGN)

4

(SIGN)

⑤

(SIGN)

CAE

(SIGN)

1589

(SIGN)

$$\underline{12/15/26} \quad 9 \frac{1}{2}$$

Nº 002996

CRA

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651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WADSWORTH - ALBERT

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Catherine A Cull

(SIGN)

SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
CRA-1916-SD-008A		12/11/86		1000	soil	1	PCB
CRA-1916-SD-009A				1130-1500		1	
CRA-1916-SD-009B				1505		1	
CRA-1916-SD-010A				1130		1	
CRA-1916-SD-011A				1530		1	
CRA-1916-SD-012A				1600		1	
CRA-1916-S-0176A		12/11/86		1646		1	
CRA-1916-S-0176B		12/11/86		1725		1	
CRA-1916-S-097A		12/12/86		1645	soil	1	PCB, Cd, Pb
CRA-1916-S-097B		12/12/86		1645		1	PCB, Cd, Pb
CRA-1916-S-098A		12/12/86		1710		1	PCB
CRA-1916-S-098B		12/12/86		1726		1	
CRA-1916-S-099A		12/13/86		905		1	
CRA-1916-S-099B		12/13/86		910		1	
CRA-1916-S-100A		12/13/86		935		1	
CRA-1916-S-100B		12/13/86		945		1	
CRA-1916-S-115A		12/12/86		1645		1	PCB, Cd, Pb
CRA-1916-S-115B		12/12/86		1645		1	PCB, Cd, Pb
				TOTAL NO. OF CONTAINERS			
				18			

RELINQUISHED BY:

①

Catherine A Cull

(SIGN)

DATE/TIME

12/13/86 1500

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

Fed Ex

SHIPPED BY:

CAC

RECEIVED FOR LABORATORY BY:

(SIGN) A. Danford

DATE/TIME

12/15/86 9:25

CONDITION OF SEAL UPON RECEIPT:

good

GENERAL CONDITION OF COOLER:

good

COOLER OPENED BY:

(SIGN) A. Danford

DATE/TIME

12/15/86 9:25

WHITE

- RECEIVING LABORATORY COPY

YELLOW

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608 2417227

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CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES LIMITED 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2 Telephone (519) 884-0510						SHIPPED TO (Laboratory name) : <i>HAZELTON</i>		
CHAIN OF CUSTODY RECORD				PROJECT NO. <i>1916</i>		PROJECT NAME : <i>CRAWFORDSVILLE</i>		
SAMPLER'S SIGNATURE <u><i>Jay Chandra</i></u> <small>(Signature)</small>					SAMPLE TYPE		NR. OF CONTAINERS	REMARKS
SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION				
CRA-1916-S-081A		12/10/86	1630		SOIL	1	DIOXIN/FLOW	
CRA-1916-S-081B		12/10/86	1640		"	1		
CRA-1916-S-097A		12/12/86	1645		"	1		
CRA-1916-S-097B		12/13/86	1645	sample dated 12/13/86 Lmk. 12-14-86	"	1		
CRA-1916-S-013A		12/13/86	1645		SEDIMENT	1		
CRA-1916-S-90A		12/14/86	1120		SOIL	1		
CRA-1916-S-90B		12/14/86	1125		SOIL	1		
TOTAL NO. OF CONTAINERS					7			

RELINQUISHED BY: ① <u>Jay Chaudhary</u> (SIGN)		DATE/TIME <u>12/15/86 6:00 pm</u>		RECEIVED BY: ② _____ (SIGN)	
RELINQUISHED BY: ② _____ (SIGN)		DATE/TIME _____		RECEIVED BY: ③ _____ (SIGN)	
RELINQUISHED BY: ③ _____ (SIGN)		DATE/TIME _____		RECEIVED BY: ④ _____ (SIGN)	
RELINQUISHED BY: ④ _____ (SIGN)		DATE/TIME _____		RECEIVED BY: ⑤ _____ (SIGN)	
METHOD OF SHIPMENT: <u>FED. EX.</u>		SHIPPED BY: <u>J.L.</u>		RECEIVED FOR LABORATORY BY: (SIGN) <u>Lynn M. Koller</u>	
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:				DATE/TIME <u>12-16-86 9:30a</u>	
				COOLER OPENED BY: (SIGN) <u>Lynn M. Koller</u>	
				DATE/TIME <u>12-16-86 9:30a</u>	

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SHIPPED TO (Laboratory name):

WADSWORTH - ALERT

CHAIN OF CUSTODY
RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDVILLE

SAMPLER'S SIGNATURE

Joy Clendinning
(SIGN)SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ. No.	SAMPLE No.	DATE	TIME	SAMPLE LOCATION	TYPE	NR. CONT.	REMARKS
CRA-1916-S-106A	12/14/86	1640	250 ml AMBER	SOIL	1	PCB	
CRA-1916-S-106B	12/14/86	1650			1		
CRA-1916-S-113A	12/14/86	1121			1		
CRA-1916-S-113B	12/14/86	1126			1		
CRA-1916-S-026A	12/13/86	1630			1		
CRA-1916-S-026B	12/13/86	1640			1		
CRA-1916-SO-013A	12/13/86	1645		SEDIMENT	1	PCB, Cd, Pb	
CRA-1916-SO-014A	12/13/86	1645			1	PCB	
CRA-1916-SO-015A	12/13/86	1745			1	PCB	
CRA-1916-S-116A	12/12/86	1600	1000 ml glass AMBER		1		
CRA-1916-S-116B	12/12/86	1605			1		
CRA-1916-SO-022A	12/12/86	1645			1		
CRA-1916-SO-118A	12/13/86	8:40			1		
CRA-1916-SO-118B	12/13/86	8:45			1		
CRA-1916-S-114A	12/14/86	11:19			1		
CRA-1916-S-114B	12/14/86	11:24			1		

RELINQUISHED BY:

①

Joy Clendinning
(SIGN)

DATE/TIME

12/15/86 6:00 PM

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

* (SIGN) *Brad Carter*

DATE/TIME

12/16/86 10:00

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) _____

DATE/TIME

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* Sample

CRA-1916-S-116B WAS NOT
Received.

No 003013

CRA

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SHIPPED TO (Laboratory name):

WADSWORTH - ALERT

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	TYPE	NR. CONT.	REMARKS
CRA-1916-5-006A2	12/14/86	1605	250 ml AMBER	SOIL	1	PCB	
CRA-1916-5-006B2		1615			1		
CRA-1916-5-008A2		1545			1		
CRA-1916-5-008B2		1550			1		
CRA-1916-5-009A2		1525			1		
CRA-1916-5-009B2		1530			1		
CRA-1916-5-016A		945			1		
CRA-1916-5-016B		950			1		
CRA-1916-5-089A		1205			1		
CRA-1916-5-089B		1210			1		
CRA-1916-5-090A		1120			1	PCB, Cu, Pb	
CRA-1916-5-090B		1125			1	PCB, Cu, Pb	
CRA-1916-5-091A		1015			1	PCB	
CRA-1916-5-091B		1020			1		
CRA-1916-5-093A		1320			1		
CRA-1916-5-093B		1325			1		
CRA-1916-5-094A		1250			1		
CRA-1916-5-094B		1300			1		
CRA-1916-5-095A		1230			1		
CRA-1916-5-095B		1235			1		
TOTAL NO. OF CONTAINERS						20	

RELINQUISHED BY:

①

Jay Churchill
(SIGN)

DATE/TIME

12/15/86 6:00 pm

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

(SIGN)

Brad Hunter

DATE/TIME

12/16/86 10:00

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN)

DATE/TIME

____/____/____

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SHIPPED TO (Laboratory name):

WADSWORTH - ALERT

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Chardill
(SIGN)SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
CRA-1916-S-065A		12/15/86	940	250 ml AMER	SOIL	1	PCB
CRA-1916-S-065B			950			1	
CRA-1916-S-065C			1000			1	
CRA-1916-S-066A			1015			1	
CRA-1916-S-066B			1025			1	
CRA-1916-S-066C			1035			1	
CRA-1916-S-067A			1055			1	
CRA-1916-S-067B			1105			1	
CRA-1916-S-068A			1130			1	
CRA-1916-S-068B			1140			1	
CRA-1916-S-068C			1150			1	
CRA-1916-S-069A			1315			1	PCB, Pb, Cd
CRA-1916-S-069B			1345			1	PCB, Pb, Cd
CRA-1916-S-069C			1415			1	PCB, Pb, Cd
CRA-1916-S-070A			1445			1	PCB
CRA-1916-S-070B			1500			1	PCB
CRA-1916-S-070C			1515			1	
CRA-1916-S-070D			1530			1	
CRA-1916-S-071A			1545			1	
CRA-1916-S-071B			1600			1	
TOTAL NO. OF CONTAINERS						20	

RELINQUISHED BY:

①

Jay Chardill
(SIGN)

DATE/TIME

12/16/86 6:00 p.m.

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

(SIGN)

Bob Custer

DATE/TIME

12/17/86 9:30

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN)

DATE/TIME

12/17/86 10:00

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N^o 002995

RELINQUISHED BY: ① <u>Jay Clenatch</u> (SIGN)	DATE / TIME <u>12/16/86 6:00 pm</u>	RECEIVED BY: ② _____ (SIGN)
RELINQUISHED BY: ② _____ (SIGN)	DATE / TIME _____	RECEIVED BY: ③ _____ (SIGN)
RELINQUISHED BY: ③ _____ (SIGN)	DATE / TIME _____	RECEIVED BY: ④ _____ (SIGN)
RELINQUISHED BY: ④ _____ (SIGN)	DATE / TIME _____	RECEIVED BY: ⑤ _____ (SIGN)

METHOD OF SHIPMENT: <u>FED. EX.</u>	SHIPPED BY: <u>J.L.</u>	RECEIVED FOR LABORATORY BY: (SIGN) <u>Brad Custer</u>	DATE / TIME <u>12/17/86 9:30</u>
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN) <u>Brad Custer</u>	DATE / TIME <u>12/17/86 10:00</u>

№ 003015

13:24

HLAW PANAFAX

UF-400 *****

608 2417227

P.02

[illegible]

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SHIPPED TO (Laboratory name):

WADSWORTH LABS

CHAIN OF CUSTODY
RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ.
NO.SAMPLE
NO.

DATE

TIME

SAMPLE LOCATION

CRA-1916-SV-16

12/17/86

1030

12 AMBER

WATER

1

PCB

CRA-1916-SV-18

1040

CRA-1916-SV-19

1200

CRA-1916-SV-21

1500

CRA-1916-GL2

1250

CRA-1916-SO-16A

1100

250 ml AMBER

SOIL

1

CRA-1916-SO-17A

1130

CRA-1916-SO-17B

1140

CRA-1916-SO-18A

1325

CRA-1916-SO-18B

1330

CRA-1916-SO-19A

1345

CRA-1916-SO-19B

1350

CRA-1916-SO-20A

1410

CRA-1916-SO-20B

1420

CRA-1916-SO-21A

1510

CRA-1916-SO-500A

1530

TOTAL NO. OF CONTAINERS

RELINQUISHED BY:

① *Jay Churchill*
(SIGN)

DATE/TIME

12/18/86, 17:30

RECEIVED BY:

② _____
(SIGN)

RELINQUISHED BY:

② _____
(SIGN)

DATE/TIME

|

RECEIVED BY:

③ _____
(SIGN)

RELINQUISHED BY:

③ _____
(SIGN)

DATE/TIME

|

RECEIVED BY:

④ _____
(SIGN)

RELINQUISHED BY:

④ _____
(SIGN)

DATE/TIME

|

RECEIVED BY:

⑤ _____
(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

JL.

RECEIVED FOR LABORATORY BY:

(SIGN) *D. Pohl*

DATE/TIME

12-19-86, 9⁰⁵ AM

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) *D. Pohl*

DATE/TIME

12-19-86, 9¹⁰ AM

WHITE

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YELLOW

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Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WATSON CATH / ALBERT CHAS

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME:

CRA FOR J.S. WILLE

SAMPLER'S SIGNATURE

(SIGN)

SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ. No.	SAMPLE No.	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	NO. OF CONTAINERS	REMARKS
CRA-1916-S-061A		14/12/86	13:30		SOIL	1	PCB
CRA-1916-S-061B		"	13:40		"	1	PCB
CRA-1916-S-062A		"	13:50		"	1	PCB, Pb, Cd
CRA-1916-S-062B		"	13:10		"	1	PCB, Pb, Cd
CRA-1916-S-063A		"	14:00		"	1	PCB
CRA-1916-S-063B		"	14:05		"	1	"
CRA-1916-S-073A		"	8:50		"	1	"
CRA-1916-S-073B		"	9:00		"	1	"
CRA-1916-S-074A		"	9:15		"	1	"
CRA-1916-S-074B		"	9:25		"	1	"
CRA-1916-S-075A		"	9:40		"	1	"
CRA-1916-S-075B		"	9:50		"	1	"
CRA-1916-S-092A		"	13:15		"	1	"
CRA-1916-S-092B		"	13:30		"	1	"
CRA-1916-S-096A		"	11:30		"	1	"
CRA-1916-S-096B		"	11:40		"	1	"
CRA-1916-S-110A		"	9:14		"	1	"
CRA-1916-S-110B		"	9:14		"	1	"
CRA-1916-S-109A		"	13:30		"	1	"
CRA-1916-S-109B		"	13:40		"	1	"
TOTAL NO. OF CONTAINERS						20	

RELINQUISHED BY: ① <u>[Signature]</u> (SIGN)	DATE/TIME 19 Dec 1986 6:00 am	RECEIVED BY: ② _____ (SIGN)
RELINQUISHED BY: ② _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ③ _____ (SIGN)
RELINQUISHED BY: ③ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ④ _____ (SIGN)
RELINQUISHED BY: ④ _____ (SIGN)	DATE/TIME _____	RECEIVED BY: ⑤ _____ (SIGN)

METHOD OF SHIPMENT: FED EX	SHIPPED BY: BOB PYLE	RECEIVED FOR LABORATORY BY: (SIGN) <u>[Signature]</u>	DATE/TIME 12/20/86 10:30
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN) <u>[Signature]</u>	DATE/TIME 12/20/86 12:30

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N^o 002999

CRA

Consulting Engineers

CONESTOGA-ROVERS & ASSOCIATES LIMITED651 Colby Drive, Waterloo, Ontario Canada N2V 1C2
Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WADSWORTH / ALEET

**CHAIN OF CUSTODY
RECORD**

PROJECT NO.

1916

PROJECT NAME :

CRA WADSWORTH

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)SAMPLE
TYPENR. OF
CONTAINERS

REMARKS

SEQ.
No.SAMPLE
No.

DATE

TIME

SAMPLE LOCATION

✓	CRA-1916-S-048A	21 DEC	14:00			2	PCB, Pb, Cd, BNA, VOC
✓	CRA-1916-S-048B	"	14:15			2	PCB, Pb, Cd, BNA, VOC
✓	CRA-1916-S-049A	"	13:00			2	PCB, Pb, Cd, BNA, VOC
✓	CRA-1916-S-049B	"	13:10			2	PCB, Pb, Cd, BNA, VOC
✓	CRA-1916-S-051A	"	11:15			1	PCB
✓	CRA-1916-S-051B	"	11:25			1	
✓	CRA-1916-S-052A	"	12:15			1	
✓	CRA-1916-S-052B	"	12:25			1	
✓	CRA-1916-S-053A	"	12:35			1	
✓	CRA-1916-S-053B	"	12:45			1	
✓	CRA-1916-S-054A	"	13:45			1	
✓	CRA-1916-S-054B	"	13:55			1	
✓	CRA-1916-S-055A	"	13:30			1	
✓	CRA-1916-S-055B	"	13:40			1	
✓	CRA-1916-S-056A	"	14:00			1	
✓	CRA-1916-S-056B	"	14:10			1	
✓	CRA-1916-S-121A	"	13:00			1	
✓	CRA-1916-S-121B	"	13:10			1	
	CRA-1916-WP-600	"	16:45			1	
	CRA-1916-WP-601	"	17:00			1	

TOTAL NO. OF CONTAINERS

24

RELINQUISHED BY:

① *Jay Churchill*
(SIGN)

DATE / TIME

12/22/86, 6:00 P.M.

RECEIVED BY:

② _____
(SIGN)

RELINQUISHED BY:

② _____
(SIGN)

DATE / TIME

RECEIVED BY:

③ _____
(SIGN)

RELINQUISHED BY:

③ _____
(SIGN)

DATE / TIME

RECEIVED BY:

④ _____
(SIGN)

RELINQUISHED BY:

④ _____
(SIGN)

DATE / TIME

RECEIVED BY:

⑤ _____
(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

(SIGN) *Brad Claster*

DATE / TIME

12/23/86, 10:30

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) *Brad Claster*

DATE / TIME

12/23/86, 10:40

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CONESTOGA-ROVERS & ASSOCIATES LIMITED
 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2
 Telephone (519) 884-0510

SHIPPED TO (Laboratory name) :
WADSWORTH / ALERT

CHAIN OF CUSTODY RECORD

PROJECT NO.

1916

PROJECT NAME :

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
 (SIGN)

SAMPLE
TYPE

NO. OF
CONTAINERS

REMARKS

SEQ.
NO.

SAMPLE
NO.

DATE

TIME

SAMPLE LOCATION

SAIL

1

PCB, PB, ED

✓

CRA-1916-S-122A

20 DEC

11:30

✓

CRA-1916-S-122B

20 DEC

11:30

✓

CRA-1916-S-123A

"

11:35

✓

CRA-1916-S-123B

"

11:35

✓

CRA-1916-S-038A

"

1715

✓

CRA-1916-S-038B

"

1730

✓

CRA-1916-S-039A

1700

✓

CRA-1916-S-039B

1710

✓

CRA-1916-S-119A

1715

✓

CRA-1916-S-119B

1730

✓

CRA-1916-S-GL3

1225

✓

CRA-1916-S-037A

21 DEC

9:30

✓

CRA-1916-S-037B

21 DEC

9:40

✓

CRA-1916-S-043A

"

10:15

✓

CRA-1916-S-043B

"

10:25

✓

CRA-1916-S-044A

"

14:30

✓

CRA-1916-S-044B

"

14:40

✓

CRA-1916-S-047A

"

10:45

✓

CRA-1916-S-047B

"

10:55

✓

TOTAL NO. OF CONTAINERS

19

RELINQUISHED BY:

① Jay Churchill
 (SIGN)

DATE / TIME

12/22/86, 6:00 P.M.

RECEIVED BY:

② _____
 (SIGN)

RELINQUISHED BY:

② _____
 (SIGN)

DATE / TIME

RECEIVED BY:

③ _____
 (SIGN)

RELINQUISHED BY:

③ _____
 (SIGN)

DATE / TIME

RECEIVED BY:

④ _____
 (SIGN)

RELINQUISHED BY:

④ _____
 (SIGN)

DATE / TIME

RECEIVED BY:

⑤ _____
 (SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.L.

RECEIVED FOR LABORATORY BY:

(SIGN) Brad Muster

DATE / TIME

12/22/86, 10:30

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN) Brad Muster

DATE / TIME

12/22/86, 10:40

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RELINQUISHED BY: ① <u>Jay Threlter</u> (SIGN)		DATE / TIME 12/23/86 6:00 P.M.	RECEIVED BY: ② _____ (SIGN)
RELINQUISHED BY: ② _____ (SIGN)		DATE / TIME _____ _____	RECEIVED BY: ③ _____ (SIGN)
RELINQUISHED BY: ③ _____ (SIGN)		DATE / TIME _____ _____	RECEIVED BY: ④ _____ (SIGN)
RELINQUISHED BY: ④ _____ (SIGN)		DATE / TIME _____ _____	RECEIVED BY: ⑤ _____ (SIGN)
METHOD OF SHIPMENT: FED. EX.	SHIPPED BY: JCL	RECEIVED FOR LABORATORY BY: (SIGN) D. Pohl	DATE / TIME 12/24/86 10 AM ⁰⁰
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN) D. Pohl	DATE / TIME 12/24/86 10 AM ⁰⁰

Nº 003005

<div style="display: flex; justify-content: space-between;"><div>CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES LIMITED 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2 Telephone (519) 884-0510</div><div>SHIPPED TO (Laboratory name): WADSWORTH / ALERT LABS</div></div>				
CHAIN OF CUSTODY RECORD			PROJECT NO. 1916	PROJECT NAME: CRAWFORDSVILLE
SAMPLER'S SIGNATURE <u><i>[Signature]</i></u> (SIGN)				
SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION
				SAMPLE TYPE
				NO. OF CONTAINERS
				REMARKS
	CRA-1916-S-041A	1/6/87	1225	500 ml AMBER
	CRA-1916-S-041B		1235	
	CRA-1916-S-042A		1100	
	CRA-1916-S-042B		1110	
	CRA-1916-S-046A		1200	
	CRA-1916-S-046B		1210	
	CRA-1916-050A		1245	250 ml AMBER
	CRA-1916-050B	✓	1300	250 ml AMBER
TOTAL NO. OF CONTAINERS 8				
RELINQUISHED BY: 1 <u><i>[Signature]</i></u> (SIGN)		DATE / TIME 1/7/87 5:00 P.M.		RECEIVED BY: 2 _____ (SIGN)
RELINQUISHED BY: 2 _____ (SIGN)		DATE / TIME _____		RECEIVED BY: 3 _____ (SIGN)
RELINQUISHED BY: 3 _____ (SIGN)		DATE / TIME _____		RECEIVED BY: 4 _____ (SIGN)
RELINQUISHED BY: 4 _____ (SIGN)		DATE / TIME _____		RECEIVED BY: 5 _____ (SIGN)
METHOD OF SHIPMENT: FED. EX.		SHIPPED BY: J.L.		RECEIVED FOR LABORATORY BY: [Signature] (SIGN)
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN) _____		DATE / TIME 1/8/87 9:30

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CRA

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CONESTOGA-ROVERS & ASSOCIATES LIMITED

651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Telephone (519) 884-0510

SHIPPED TO (Laboratory name):

WADSWORTH / ALERT

CHAIN OF CUSTODY
RECORD

PROJECT NO.

1916

PROJECT NAME:

CRAWFORDSVILLE

SAMPLER'S SIGNATURE

Jay Churchill
(SIGN)SAMPLE
TYPENO. OF
CONTAINERS

REMARKS

SEQ.
NO.SAMPLE
NO.

DATE

TIME

SAMPLE LOCATION

CRA-1916-WP-602 1/10/87 1445

WIPE

1

PCB RUSH!!

CRA-1916-WP-603 1/10/87 1500

WIPE

1

PCB RUSH!!

CRA-1916-WP-604 1/10/87 1515

WIPE

1

PCB RUSH!!

TOTAL NO. OF CONTAINERS

3

RELINQUISHED BY:

①

Jay Churchill
(SIGN)

DATE/TIME

1/10/87 15:00 P.M.

RECEIVED BY:

②

(SIGN)

RELINQUISHED BY:

②

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

③

(SIGN)

RELINQUISHED BY:

③

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

④

(SIGN)

RELINQUISHED BY:

④

(SIGN)

DATE/TIME

____/____/____

RECEIVED BY:

⑤

(SIGN)

METHOD OF SHIPMENT:

FED. EX.

SHIPPED BY:

J.C.

RECEIVED FOR LABORATORY BY:

(SIGN)

J. Danford

DATE/TIME:

1/12/87 9:41

CONDITION OF SEAL UPON RECEIPT:

GENERAL CONDITION OF COOLER:

COOLER OPENED BY:

(SIGN)

DATE/TIME

WHITE

- RECEIVING LABORATORY COPY

YELLOW

- SHIPPER'S COPY

PINK

- CRA LABORATORY COPY

GOLDEN ROD

- CRA OFFICE COPY

Nº 003011

Purpose of analysis (use back of front sheet if necessary)

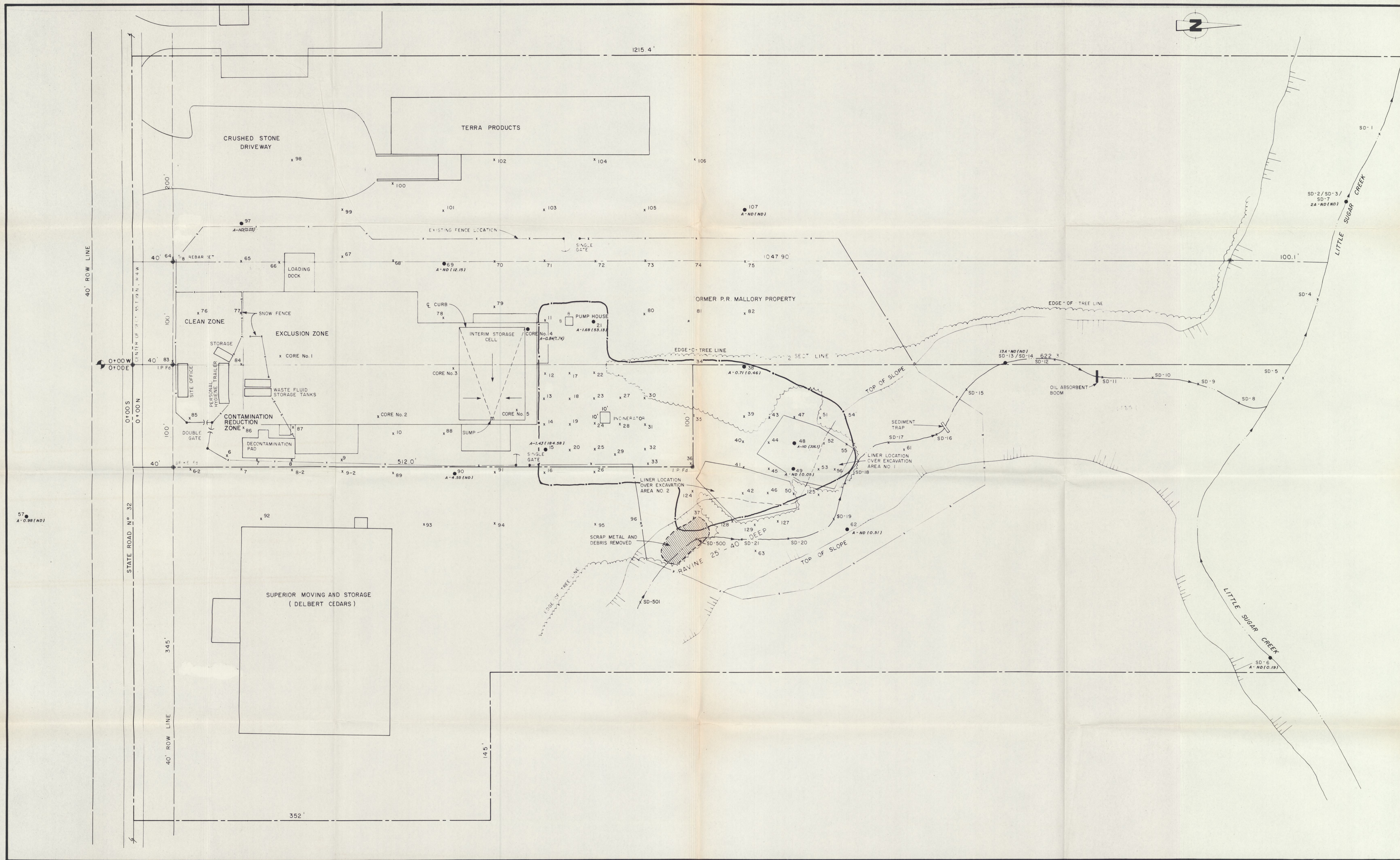
1600 FOURTH ST. SE
CANTON, OH 44707
(216) 454-8304

N^o 1360

PROJECT LOCATION		NAME OF CLIENT		PROJECT TELEPHONE NO.		PROJECT NUMBER									
CRAWFORDSVILLE		COMPTON - ROBERTS AND ASSOC. LTD.		(518)-884-0510		1916									
ANALYST	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DATE	TIME	SAMPLE DESCRIPTION TYPE	REMARKS	TRANSFER NUMBER & CHECK								
							1	2	3	4	5	6	7		
	KRA-1916-W-705	TWO 500-ml WATER	1/14/87	1500	WATER	ANALYZE FOR PCBs									
		2 CONTAINERS TOTAL													
Person Responsible for sample:		Affiliation		Date	Time	TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME				
JOY CARROLL		COMPTON - ROBERTS AND ASSOC. LTD.				1		Joy Carroll	SENT BY FED. EX.	1/15/87	5:00 P.M.				
Purpose of analysis (use back of front sheet if necessary)						2			D. Pohl	1/16/87	9:00 AM				
						3									
						4									
						5									

4. 2.1987 14:55

FROM WADSWORTH CANTON



LEGEND

SAMPLE AREA A

ND NOT DETECTED

SD INDICATES A SEDIMENT SAMPLE;
ALL OTHERS ARE SOIL SAMPLES

SOIL FROM TOP SIX INCHES
 SAMPLE NUMBER
 TOTAL FURAN CONCENTRATION (ppb)
 TOTAL DIOXIN CONCENTRATION (ppb)

NO	Revision	Date	By

FORMER P.R. MALLORY PLANT SITE
CRAWFORDSVILLE, IND.

TOTAL DIOXINS, FURANS -
SOIL AND SEDIMENT SAMPLES

CRA Consulting Engineers CONESTOGA-ROVERS & ASSOCIATES 651 Colby Drive, Waterloo, Ontario Canada N2V 1C2			
Drawn by BLP/BYO	Scale 1" = 40'	Date APRIL 1987	File NO 39
Designed by J.C.	Field book	Project NO 1916	Rev NO 39
Checked by RTP		Drawing NO 14	PLAN 3

